PERCEPTIONS OF GIRL CHILDREN'S PARENTS REGARDING HPV VACCINE ROLL-OUT PROGRAMME AT SCHOOLS IN TSHWANE DISTRICT

BY

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DEDICATION

I want to dedicate this dissertation to my husband, Stephen Calder, who has always been my support and comfort.

DECLARATION

I declare that **"Perceptions of mothers/guardians of girl children regarding HPV vaccine roll-out programme at schools in Tshwane, District"**is my own work and that all the sources that I have used or quoted have been acknowledged in the study by means of complete references. The dissertation has not been submitted before, for any degree or examination for this or any other university or academic institution.

C M. Calder — Signed

25 January 2020 — Date

Catherine Mary Calder

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ACRONYMS

ACIP	Advisory Committee on Immunization Practices
ASCO	American Society of Clinical Oncology
BaP	Benzo[a]pyrene.
CIN	Intraepithelial neoplasia.
DBE	Department of Basic Education.
DSD	Department of Social Development.
EPI	Expanded Programme on Immunisation.
HPV	Human Papillomavirus.
HIV	Human Immunodeficiency Virus.
ISHP	Integrated School Health Program.
MCC	Medicines Control Council.
NDoH	National Department of Health.
RTHC	Road to Health Card.
SBHC	School-based Health Centres.
STIs	Sexually Transmitted Infections.
TB	Tuberculosis.
WHO	World Health Organization.

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ABSTRACT

The aim of the study was to gain an in-depth understanding of the girl children's parents perceptions regarding the papillomavirus vaccine roll-out programme at schools in Tshwane District, Gauteng Province. The researcher used a qualitative exploratory research design to address the research objective of the study as the qualitative method enables the researcher to explore and describe the study phenomenon. Data were collected from 12 parents of girl children who received the papillomavirus vaccine at one of the schools in Soshanguve township, which is one of the biggest townships in the Tshwane District. Data was analysed manually using content analysis.

The following four superordinate themes emerged from data analysis: a) Communication of the programme, b) Motivation for allowing their children to be immunized. c) Response to immunisation, d) Suggested ways of enhancing the programme. These themes were discussed in relation to existing literature. Recommendations were made based on the findings to enhance the papillomavirus vaccination programme and for future research.

Key Concepts: *Cervical cancer; girl; human papillomavirus; human papillomavirus vaccine; parent; perceptions.*

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This study reports on the perceptions of girl children's parents regarding the human papillomavirus (HPV) vaccine roll-out programme at schools in Tshwane District, Gauteng Province. Human papillomavirus (HPV) is a sexually transmitted virus that infects cells and may result in precancerous lesions in the cervix and, if not treated immediately, may result in invasive cervical cancer (Braaten & Laufer 2008: 2, Sankaranarayanan, Budulah & Rajkumar 2001: 954). This HPV is very common among women. Braaten and Laufer (2008: 2) mention that this virus would infect about 80% of women in their lifetime.

This chapter provides an introduction and background to the study, problem statement, research aim, objectives, and research questions. It further highlights the significance of the study and definitions of keywords for this study. The chapter further introduces the research methodology, measures used to ensure trustworthiness and ethical aspects which guided the entire study. Finally, the chapter provides a preview of the entire study by highlighting the aspects covered in each chapter.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Globally, cervical cancer is a significant cause of morbidity and mortality among women. Developing countries accounted for 370000 out of a total of 466000 cases of cervical cancer globally in the year 2000 (Sankaranarayanan et al. 2001: 954). It leads to approximately 266,000 deaths every year, with 85% of these incidences occurring in developing countries (Adamson, Huchk, Moss & Kinkel 2015: 2). One of the contributory factors for the high cervical cancer mortality rate in developing countries is that most of the women visit the health care facility at an advanced stage when prospects of cancer treatment are limited (Schwarz & Leo 2008: 2).

In South Africa, cervical cancer is the second most common cancer among women (Moodley, Tathiah & Mubaiwa 2013: 318). According to Jordaan, Michelow, Richter, Simoens and Bogers (2016: 1), in 2012, it was estimated that there were 7735 new cases of cervical cancer among South African women in 2012, and 4248 women died from the disease. Based on a study done in 2017, each year, 7700 women in South Africa are diagnosed with cervical cancer, and annually more than 4000 women die of cervical cancer (Mofolo, Sello, Leselo, Chabanku, Ndlovu, Naidoo & Joubert 2018: 1).

Cervical cancer is the most prevalent cancer among women aged 15 to 44 years. Women infected with HIV are at increased risk for HPV infections and therefore have a significantly greater incidence of cervical cancer. South Africa remains the center of the HIV pandemic. Twenty percent of all people living with HIV are in South Africa, and 20 percent of new HIV infections occur there too. There are an estimated 7.2 million South Africans living with HIV in South Africa (Allinder & Fleishman 2019: 1).

There are more than 120 identified types of HPV (Aref-Adib & Freeman-Wang 2016. 251). However, HPV 16 and 18 are the only two types of HPV, which poses the highest risk and responsible for more than 70% of all cervical cancer cases, while type 6 and 11 are responsible for 96-100% of genital warts (Wiglea, Coast & Watson-Jones 2013:3811). Globally the prevalence of genital warts is high among people living with HIV, which, if not treated, will ultimately progress to cervical cancer. Genital warts are highly infectious and occur among sexually active people, especially during the adolescence stage, with a tendency to recur in about 75% of cases (Moodley et al. 2013:318). Therefore young girls must be vaccinated before exposure to HPV or initiation of sexual debut.

The availability of prophylactic vaccines against HPV seems to be a promising strategy in the prevention of cervical cancer. The prophylactic vaccines against quadrivalent HPV against high-risk types 16,18,6 and 11 and bivalent vaccines against HPV 16 and 18 are licensed in most developed countries. However, in developing countries, these are still in the pilot stage. However, the vaccines do not protect against other viruses not included in the vaccines or pre-existing infections (Henderson, Clements, Damery, Wilkinson & Austoker 2011:41). The World Health Organization (WHO 2019: 9) recommended that

routine HPV vaccine should be included in the routine national immunisation programmes. Over the last decade, the impact of the quadrivalent HPV vaccine has shown effectiveness in targeted populations with high coverage. The greatest impact is seen where the vaccine is routinely administered before HPV exposure (Garland, Kjaer, Muñoz Dominiak-Felden 2016: 527). Vaccinating young girls before initiation of sexual activity or exposure to HPV is a core in cervical cancer prevention and control programmes. However, periodic screening should be encouraged (Adesina, Saka, Isiaka-LawalEzeoke 2018: 68).

A study conducted in London by Waller, Marlow and Wardle (2006: 1257) found that most women felt the need for more information about the HPV vaccine, especially regarding its safety and possible side effects. Some women were concerned that the HPV vaccine would encourage girls into behaviour that might put them at risk of pregnancy or HIV. A study conducted in the United Kingdom by Hilton and Smith (2011:4409) regarding adolescent girls' understanding and experiences of HPV found that girls accepted the vaccine because people they trust, such as their parents and nurses, recommended it. On the other side, a study conducted as a pilot project at a private school in KwaZulu Natal found that utilisation of school health teams and involvement of stakeholders improved uptake of the vaccine (Tathiah, Moodley & Naidoo 2015: 954).

1.3 STATEMENT OF THE RESEARCH PROBLEM

To work towards reducing morbidity and mortality from HPV and cervical cancer in South Africa, the minister of health launched a national vaccination campaign against cervical cancer in March 2014. South Africa is one of few countries with funding from the government to provide the vaccine to all grade four girls between the ages of 9-12 years in public schools. For the programme to be successful, the cooperation and support of children’s mother or guardian are important as they are the ones expected to sign the consent form. However, some of the parents are reluctant to sign consent form for their childrent to be immunised while others prohibit their children from going to school on the day of vaccination. Some of the parents Hence this study which explored the girl children’s

perceptions regarding the HPV vaccines roll-out programme at schools in Tshwane District.

1.4 RESEARCH AIM

The aim of the study was to gain an in-depth understanding of the perceptions of parents of girl children regarding the HPV vaccine roll-out programme at schools in Tshwane District, Gauteng Province.

1.5 RESEARCH OBJECTIVES

The objective of the study was to explore and describe the parents of girl children's perceptions regarding the HPV vaccine roll-out programme at schools in Tshwane District.

1.6 RESEARCH QUESTION

The study was guided by the following research question: What are the perceptions of parents of girl children regarding the HPV vaccine roll-out programme at schools in Tshwane District?

1.7 SIGNIFICANCE OF THE STUDY

The findings of the study shed light on parents' perceptions of girl children regarding the roll-out programme of the HPV vaccine in schools. The results led to identifying the support that parents need to ensure adherence to the Human papillomavirus Vaccine programmes. The findings have guided the researcher in coming up with recommendations that might assist in improving the health care provided by health care providers when administering the Human Papillomavirus Vaccine (HPV). The findings

may also assist the government in improving the communication approaches used for the HPV vaccine and cervical cancer.

1.8 DEFINITION OF KEY CONCEPTS

The following are the definitions of the key concept utilised in this study:

1.8.1 Cervical Cancer

Cervical cancer is when the thin layer of cells in the cervix become abnormal and multiply. The main cause for the cells to change is a virus the HPV (The American College of Obstetricians and Gynecologist 2018:1).

1.8.2 Girl

A girl is “a female child” (Concise Oxford English Dictionary 2008: 601). In respect to this study, a girl is a female learner within the ages of nine to twelve years (Moodley et al. 2013: 318).

1.8.3 Human Papillomaviruses

Human papillomavirus (HPV) is a virus that mainly causes cervical cancer, anogenital and oropharyngeal malignancies, and anogenital warts in both men and women (Patel, Brotherton, Pillsbury, Jayasinghe, Donovan, Macartney & Marshall. 2018: 30).

1.8.4 Human Papillomaviruses Vaccine

This is a vaccine used to prevent infection and lesions from HPV types 16 and 18 (Schillera, Castellsagué & Garland 2015: 124).

1.8.5 Parent

A parent is one that “begets or brings forth offspring.” (Merriam Webster 2020:1). In this study, a parent means a biological mother or father of girls aged nine to twelve years.

1.8.6 Perceptions

Perceptions are a process of acquiring and processing information. It is concerned with the ideas which people create in their world of images and ideas (Démuth 2013: 13). In this study, study, the term refers to the views, knowledge, and attitudes towards HPV vaccination.

1.9 RESEARCH METHODOLOGY

A research methodology is a path used from the formulation of the problem, setting the objective, collecting and analysing data and interpreting the results (Sileyew 2019: 3; Williams 2007:65). The researcher used a qualitative research approach to address the research objective of the study as the qualitative method enables the researcher to explore and describe the study phenomenon.

1.10 MEASURES TO ENSURE TRUSTWORTHINESS

Trustworthiness in qualitative research studies is ensured by using the criteria of credibility, dependability, conformability, transferability, and authenticity (Polit & Beck 2016:747). The processes followed to meet these criteria are communicated in chapter three.

1.11 ETHICAL CONSIDERATIONS

Ethical considerations are a significant part of the research. Ethical standards contribute to the achievement of the scientific research study and consist of knowledge, honesty, and error avoidance. The principles of justice, informed consent, confidentiality, protection of participants from harm, voluntary participation were upheld throughout the study (Zukauskas, Vveinhardt, & Andriukaitienė 2018: 143). A discussion of the ethical principles applied in this research study is described in Chapter three.

1.12 SCOPE OF THE STUDY

The study focused only on the mothers of girl children who had received the Human Papillomavirus Vaccine at Soshanguve schools in the Tshwane District.

1.13 STRUCTURE OF THE DISSERTATION

The dissertation is structured according to the following chapters:

Chapter 1: Provides an introduction and general orientation to the study focusing on the background, problem statement, research aim, objectives as well as research questions. The key concepts used in the study are defined. Research methodology, ethical considerations, and measures to ensure trustworthiness are highlighted. The final section of this chapter displays the structure of the dissertation.

Chapter 2: Provides reports on a review of the relevant literature the researcher consulted on the subject that is available in order to put the research into perspective. The literature review provided a clear picture of what is known and unknown about perceptions of parents of girl children who have received the HPV vaccine.

Chapter 3: Describes the methodologies used in the exploration of the perceptions of parents of girl children who have received the Human Papillomavirus Vaccine from a school at Soshanguve in Tshwane District. A description is given of the research approach, design, setting, population, sample, sampling technique, data collection tool,

data collection technique, and data analysis. The chapter also provides full detail on the ethical aspects and measures to ensure trustworthiness undertaken by the researcher throughout the study.

Chapter4: Presents results obtained after analysis of data. Results are presented according to themes and sub-themes supported by direct quotations from participants.

Chapter 5: Gives a discussion of the findings in relation to existing literature. The chapter also provides conclusions of the study and recommendations in relation to the findings of the study.

1.14 CONCLUSION

This chapter provided an overview of the study. Furthermore, the research aim, objective, and research questions are presented. It also highlighted the research methodology followed in this study. The chapter further introduced ethical aspects and measures used to ensure trustworthiness. Finally, it provides the synopsis on how the entire dissertation is structured. The next chapter presents the process of literature reviewed relating to the study.

LITERATURE REVIEW

CHAPTER TWO

2.1 INTRODUCTION

The literature review is a systematic method for identifying, evaluating, and interpreting the work of other scholars or researchers in a specific field of study (LoBiondo-Wood & Harber 2014: 57). The purpose of conducting a literature review, according to Baker (2016: 265), is to objectively demonstrate the researcher's knowledge about a field of study and to define relevant key terms and establish the vocabulary, theories, variables, and phenomena on the topic. Holland and Rees (2010:148) state that the literature review provides an insight into the extent of the topic and what others say about the topic. LoBiondo-Wood and Harber (2014:57) believe that a literature review is conducted to identify practice protocols and promote evidence-based practice in nursing. While Kaminstein (2017: 2) documented that the literature review highlights recent findings and emphasizes gaps in the literature and justifies the focus of the dissertation. In conducting the literature review for this study, the researcher consulted different sources of information. The sources consulted include relevant textbooks, journal articles, government policies, and guidelines, internet sources, and World Health Organisation (WHO) technical reports.

This chapter presents the epidemiology and development of cervical cancer through contracting HPV. This chapter further establishes the relationship between HPV and cervical cancer. Primary prevention of cervical cancer is discussed, specifically HPV prevention through vaccination. It also provides information on people's perceptions concerning the HPV vaccine. Finally, the literature highlighted the gaps in the literature, which made the researcher see the importance of conducting this study on the perceptions of girl children's parents regarding HPV vaccine roll-out programme at schools in Tshwane District, Gauteng Province.

2.2 EPIDEMIOLOGY OF CERVICAL CANCER

Despite that cervical cancer is a preventable non-communicable disease, it is still a public concern. Worldwide, invasive cervical cancer is the fourth most common cancer among women and the fourth cause of cancer-related death in women (Small, Bacon, Bajaj & Gaffney 2017: 2404). Furthermore, Small et al. (2017: 2404) states that worldwide, there are an estimated 530,000 new cases of cervical cancer annually, with 270,000 deaths. The highest percentages of death from cervical cancer, 85% occurs in underdeveloped or developing countries.

Adegoke, Kulasingam and Virnig (2012:1031) stated that in the United States, there were an estimated 12,200 new cases of cervical cancer diagnosed in 2010, with an incidence rate of 7.9/100,000 woman. In the UK, population-based cervical screening programmes are effective in reducing morbidity and mortality from cervical cancer. In China, the standardised incidence rate and mortality rate for Cervical cancer are 9.6 and 4.3/100,000 women, respectively (Yu, Xu, Sun, Li, Li, Wang, Zang & Xu 2016 1371). Sreedevi, Javed, and Dinesh (2015:405) reported that in India, cervical cancer is most common in women aged 15 to 44 years with the peak age incidence of 55 to 59 years. Each year in India, 122,844 women are diagnosed with cervical cancer, and 67,477 die from the disease.

While the incidence and mortality rates from cervical cancer have fallen significantly in developed countries, this is not the case in developing countries (Anorlu 2008:41). Bouassa, Prazuck, Lethu, Meye and Be´lec (2017:16) reported that 75,000 new cases of cervical cancer and close to 50,000 deaths per year are from sub-Sahara Africa, with HIV adding to increased numbers.

2.3 DEVELOPMENT OF CERVICAL CANCER

Cervical cancer is caused by persistent infections with Human papillomavirus (HPV) (Radley, Saah & Stanley 2016: 768). In women, an immune response is generated approximately 60% of the time. HPV infections can clear up on its own, and most pre-cancerous lesions resolve naturally (Gravitt & Winer 2017: 2). HPV is a common,

sexually transmitted virus. When the cells lining of the cervix are infected by HPV, it may cause cervical intraepithelial neoplasia and invasive cervical cancer (Abraham, Strickler, Jing & De Souza 2013: 405). There are more than 100 types of HPV, thirteen of which are the most high-risk types. Two most oncogenic viruses are 16 and 18, which are implicated in the development of cervical cancer (Aggarwal 2014: 776, Small et al. 2017: 2405, Yu et al. 2016:1371). The morbidity and mortality from cervical cancers could be greatly reduced by preventing HPV infections. The HPV vaccines are available and are most effective when administered before the onset of sexual activity (Bloem, Ogbuanu 2017: 20). According to Markowitz, Dunne, Saraiya, Chesson, Curtis, Gee…and Unger (2014: 4), the first symptoms of HPV infection occur within a few years of becoming sexually active, making its prevalence to be highest among populations in their late teens and early twenties (18-28 years). According to the WHO fact sheet (2018:1), it can take 15 to 20 years for cervical cancer to develop in women with normal immune systems after infection by HPV. However, among HIV-infected women, due to having a weakened immune system, cervical cancer can develop faster, over a period of only five to 10 years. According to Ngoma and Autier (2019:2), HIV positive women have an impaired ability to clear HPV infection. HIV-positive women have a 2 to 12-times higher risk of developing intraepithelial neoplasia (CIN) lesions compared to HIV-negative women (Ghebrea, Groverd, Xue, Chuangf & Simondsg 2017: 101).

2.4 HUMAN PAPILLOMAVIRUS AND CERVICAL CANCER

Human papillomavirus (HPV) is the most common sexually transmitted infection. Worldwide, about 75% of sexually active women have or have had an HPV infection in their lifetime (Assoumou, Mabika, Mbiguino, Mouallif, Khattabi & Ennaji 2015: 1). The relationship has been well established between HPV and cervical cancer. HPV 16 and 18 were the two most common types (Yu et al. 2017: 2). Human papillomavirus is highly contagious. There are more than 100 HPV types, 40 of these can infect the genital tract, many are asymptomatic, and multiple types may coexist (Hinkle & Cheever 2014: 1652). Persistent infection with one or more of the “high-risk” (or oncogenic) types of HPV lead

to precancerous changes in the cervix and eventually cancer (Aggarwal 2014: 776, WHO 2013: 3). According to Campos, Tsu, Jeronimo, Mvundura and Kim (2017: 2008). HPV is the most common infection acquired through sexual intercourse (Mejilla, Li & Sadowski 2017: 306). The infection may resolve spontaneously after one to two years. A minority of HPV infections persist, leading to cervical pre-cancer, which, if not treated, the infection may progress to cancer in about 10 to 20 years later. The probability of developing persistent HPV infections from HPV at an earlier age and acquiring cervical cancer sooner are in women living with HIV (WHO 2013: 3).

2.4 1 Causes and risk factors

Various factors have been implicated in the development of cervical cancer. Risk factors involve early sexual debut, multiple male sexual partners, high parity, young age at first full-term pregnancy, prolonged use of oral contraceptives, and HIV infections. (Mwaka, Orach, Were, Lyratzopoulos, Wabinga & Roland 2015: 855). These factors identified factors are discussed below.

2.4.1.1 High parity

According to Jensen, Schmiedel, Norrild, Frederiksen, Iftner and Kjaer (2013: 236), there is a strong link between HPV and cervical intraepithelial neoplasia and an increasing number of full-term pregnancies. The hormonal changes in pregnancy such as the increased levels of oestrogen and progesterone affect the immune response to HPV and increase the risk of developing cervical intraepithelial neoplasia (Paramita, Soewarto, Widodo & Sumitro 2010: 269). Cervical intraepithelial neoplasia grade three risk increases with childbirth and women with persistent HPV infection (Jensen et al. 2013: 237).

2.4.1.2 Oral contraceptives

The increased levels of oestrogen and progesterone over the long term are associated with contracting HPV and cervical intraepithelial neoplasia (Mwaka et al. 2015: 855; Paramita et al. 2010: 269, Vanakankovit & Taneepanichskul 2008: 7). Women who had used oral contraceptives over a shorter period were found to have a significantly lower risk of cervical cancer than those women who have used oral contraceptives for a longer period (Vanakankovit & Taneepanichskul 2008: 7).

2.4.1.3 Early sexual debut

Early age at first sexual intercourse and infection with HPV is an important risk factor for cervical cancer (Plummer, Peto & Franceschi 2012: 2639). Louie, de Sanjose, Diaz, Castellsague, Herrero, Meijer and Bosch (2009:1196) reported that an adolescent cervix is a mixture of columnar, squamous and metaplastic epithelium called the transformation area. This biological tendency of the immature cervix during adolescence is more susceptible to persistent HPV infections and therefore have a greater risk of developing cancer.

2.4.1.4 Cigarette smoking

The prevalence of HPV is associated with cigarette smoking (Min, Lee, So & Kim 2018: 48). It has been found that the mucus of the cervix of cigarette smokers contains measurable amounts of benzo[*a*]pyrene (BaP) (a hydrocarbon found in coal tar), and nicotine derived nitrosamines (a known carcinogen). The effects of long-term nicotine exposure could affect persistent cellular proliferation, and inhibition of apoptosis (a process of cell death that occurs in multicellular organisms) (Chen, Ho, Guo & Wang 2010: 118; Fonseca-Moutinh 2011: 2). There is a stimulation of vascular endothelial growth factor, which is part of the system that restores the oxygen supply to tissues, resulting in the microvessels becoming denser (Fonseca-Moutinh 2011:2).

2.4.1.5 Sexually Transmitted Infections and cervical cancer

Sexually transmitted infections (STIs) are infections that are passed from one person to another through sexual contact. These infections can be contracted through any contact between the genitals of one person and the genitals, anus, mouth, or eyes of another person. Human papillomavirus (HPV) is one of the most common STIs worldwide. Human papillomavirus on the cervix can lead to cervical cancer (Roura, Iftner, Vidart, Kjaer, Bosch & Muñoz Castellsagué 2012:2). The HPV can be spread from performing oral sex on infected genitals, which may lead to oropharynx cancer (Chung, Bagheri & D'Souza 2014: 364).

2.4.1.6. Lower socioeconomic status

Vargas-Hernández (2017: 87) refers to low socioeconomic status as a risk factor for cervical cancer. In developing countries, cervical cancer is the highest cause of death among women (Sreedevi et al. 2015: 405). In developing countries where lower education and lower socioeconomic status prevail, there is also a higher level of HPV infections and therefore more invasive cervical cancer incidence rates (Anorlu 2008: 42; Bernard, Johnson, Thompson, Roland, Lai, Cokkinides, Tangka, Nikki, Hawkins, Lawson & Weir 2008: 2915).

LaVignea, Triedmanb, Randall, Trimbled and Viswanathane (2017: 16) found that there *is* a great difference in cervical cancer incidence and mortality between developed and developing countries. The death rate is 18 times higher in low and middle-income countries than the developed countries. About 85% of cases and cervical cancer deaths occur in low and middle-income countries. Further investigation by LaVignea et al. (2017: 20) showed that this growing gap in incidence and mortality rate between developed and developing countries; was due to persistent financial, infrastructural and educational limitations and lack of access to HPV preventative care. Women in lower socioeconomic status have limited access to prevention mechanisms, awareness of cervical cancer,

vaccination, and screening services. These leaves them more vulnerable to cervical cancer and its consequences (Tadesse et al. 2015: 11).

2.4.1.7 HIV with Human papillomavirus

There is a strong link between HIV, HPV, and an increased risk of developing cervical cancer (Abraham *et al.* 2013: 411). HIV Positive women tend to develop cervical cancer at an earlier age than women who are HIV negative (Abraham et al. 2013: 405; Anorlu 2008: 43). HIV positive women are more likely to have persistent HPV infections than HIV negative women. This is due to the impaired immune response that alters the normal capacity to eliminate HPV from the cervix (Bigoni, Catarino, Benski, Viviano, Munoz, Tilahizandry, Petigna & Vassilakos 2017: 1; Jordaan et al: 2016: 3; Frazier, Sutton, Tie, McNaghten, Blair & Skarbinski 2016: 125). The level of immunosuppression has an important association with cervical cancer risk. Lower CD4 counts have been associated with increased risk of cervical cancer and significantly more multiple HPV infections (Frazier et al. 2016: 125). In sub-Saharan Africa, there is evidence of the effect of HIV infection in speeding up HPV to cause invasive cervical cancer. A study conducted by Clifford, Tully and Franceschi (2017:1233) reported the prevalence of invasive cancer of 62% for HIV-positive women as compared to 24% for HIV-negative women. A study by Clifford et al. (2016: 332) on HIV-positive women indicated that HPV 16 and 18 vaccines may prevent HPV infections from progressing to invasive cervical cancer, irrespective of HIV infection.

2.4.1.8 Multiple sexual partners

Lui, Liu, Liu, Ye and Chen (2015: 3893) study reported an increased risk of cervical cancer in women with multiple sexual partners compared to those with fewer partners. Roura et al. (2012: 2) finds that the increased infection rates among young women are due to higher exposure to HPV through multiple sexual partners. Sharma, Kathait, Jain and Das

(2015: 11) found in a study on different socio-sexual behaviour that adolescent girls who had a higher prevalence of HPV infection had multiple sexual partners.

2.5 PREVENTION OF CERVICAL CANCER THROUGH HPV VACCINATION.

The Advisory Committee on Immunization Practices (ACIP) of the United States of America (USA) recommends HPV vaccination sequence for females to begin at age nine years and be completed at the ages of 11–12 years (Meites, Szilagyi, Chesson, Unger, Romero & Markowitz: 2019: 698). Vaccination is also recommended for females aged 13–26 years who have not been vaccinated previously or who have not completed the 3-dose series (Park et al. 2015: S852). The American Society of Clinical Oncology (ASCO) in April 2016 recommended HPV Vaccination for Cancer Prevention. The recommendation is for all health resource settings to offer two doses of HPV vaccine within an interval of at least six months (Arrossi, Temin, Garland Sanjos 2017: 612). According to WHO, the target population for HPV routine vaccination should be primary and junior high school female students, aged 9-14 (WHO. 2016:10; Arrossi et al. 2017:612). The American Society of Clinical Oncology (ASCO) specified that individuals who are HIV positive should receive three doses (Arrossi et al. 2017: 612).

There are two types of vaccines; the quadrivalent vaccine consisting of 6, 11, 16 and 18, and bivalent HPV 16 and 18. Since 2006, the HPV vaccine quadrivalent (type 6,11,16,and 18) and bivalent (type 16 and 18) vaccines have each been licensed in over 100 countries. In at least 40 countries by 2012, the HPV vaccine had been introduced into national immunization programs (Markowitz, Tsu. Deeks, Cubie, Wang. Vicari & Brotherton. 2012:139).

The HPV vaccines prevent most of the invasive cervical cancers. It is reported that vaccinating against HPV types 16 and 18 could potentially prevent 70% of cervical cancers (Moodley 2009: 12; Arrossi et al. 2017:611; Joura & Pils 2016: 125). Clinical trials of these vaccines have demonstrated excellent efficacy (over 90%) against persistent HPV infection and 100% efficacy against cervical intraepithelial neoplasia (Moodley 2009:

12). Women who have been vaccinated against HPV will start to be screened using the HPV test (the test that checks for the virus HPV bivalent vaccination was introduced in 2008 for girls at age 17 years (Castanon, Landy, Pesola, Windridge & Sasieni 2018: 34). The vaccines cannot treat HPV infection or HPV related diseases such as cancer. Therefore, the vaccine needs to be administered before the first sexual activity prior to exposure to HPV (WHO 2013: 4).

2.6 PEOPLE'S PERCEPTIONS TOWARDS HPV VACCINE

Perceptions of people towards HPV have a major role to play in the success of the vaccination programme. A study conducted by Holman, Benard, Roland, Watson, Liddon and Stokley (2014: 78) indicated that in the United States of America, most parents have a positive attitude towards the HPV vaccine. The parents' concerns were the age of vaccination and the cost involved. Parents further reported the need for more information before vaccination of their children as they do not have adequate information. This lack of knowledge was addressed using media. A study conducted amongst pre-university students in Waslow, Malasia by Kwang and Hatta (2014:9117) showed that with increased knowledge, perceptions of the HPV vaccine improved. The increase in knowledge increased the students' intention for vaccination (Kwang et al. 2014:9117).

Abiodun, Olu-Abiodun, Sotunsa and Oluwole (2014: 8) highlighted the need to assess healthcare providers' knowledge and current practices in order to ensure the prevention of cervical cancer. A study conducted in USA by Massad, Evans, Weber, D'Souza, Hessol, Wright, Howard, Strickler and Wilson (2015: 37) indicate that women at high-risk for cervical cancer have considerable knowledge gaps in understanding of HPV and cervical cancer prevention even though there have been of years health education with this regard. Dodd, McCaffery, Marlow, Ostini, Zimet and Waller (2014: 204) found that more women from the USA had heard of HPV screening compared to those in the United Kingdom (UK) and Australia, but this did not mean that they had greater knowledge about HPV testing. In a study about French women by Haesebaert, Lutringer-Magnn, Kalecinkski and Lasser (2012: 9), women know the aim of Pap Smear testing and that

there is an HPV vaccine. However, women did not know that HPV causes cervical cancer. The majority of participants were in favour of their daughters having the vaccine ages between 14-16 years

A study done in the urban and rural regions of South Africa by Shabania, Moodley, and Naido (2019: 1, 5), indicated that all participants agreed that the HPV vaccine could save lives, but they wanted more information on the HPV vaccine before they would recommend it. Only 25% of the participants perceived the HPV vaccine as safe. The other 75% of the participants were unsure. About 57% of participants were concerned that the HPV vaccine would encourage sexual promiscuity. The study concluded that to improve perceptions of people towards the HPV vaccine, further education about HPV infection and vaccine was essential.

A study conducted in China by He and He (2018: 3) indicated that few participants had heard of HPV, and few knew that it is associated with cervical cancer. This emphasised the urgent need for education and campaigns to raise awareness of HPV and its link to cervical cancer. Similar results were found in a study that was conducted in Delhi, a region of India by Hussain, Nasare, Kumari, Sharma, Khan, Das and Bharadwaj (2014: 4) to evaluate the knowledge and awareness of cervical cancer and HPV vaccine among the high-school and undergraduate students. The findings indicated that awareness of HPV was very poor. The limited awareness was the reason for most of the participants' unwillingness to be vaccinated against the HPV.

The findings of a study carried out in Western Uganda bTuriho, Okello, Muhwezi and Katahoire (2017: 13) on the HPV vaccination of adolescent school girls, showed that community members perceived HPV vaccination mostly in a favourable manner. The communities accepted the HPV vaccination because it was understood that it prevented cervical cancer and protected the girls’ future health. Community members' attitudes about vaccinations, in general, were largely favourable, yet there were still concerns about adverse effects, safety, and newness of the vaccine. In this study, some misconceptions were noted. The misconceptions include fear of possible long-term physical harm to the vaccinated arms, and long term reproductive health problems such as childbirth complications and alteration of the menstrual cycle (Turiho et al. 2017: 14).

A systematic review was done on the knowledge and awareness of the HPV vaccine and acceptability to vaccinate in Sub-Saharan Africa (Wamai, Bain, Welty, Welty & Ogembo 2014: 4). Thirteen countries participated in these studies. Five studies were done on the willingness to recommend the HPV vaccine. Four studies on the willingness to get vaccinated. Four studies on the willingness to have a daughter vaccinated. One study was done on the willingness to participate in vaccine trials. Another study was conducted on the ‘‘interest’’ in the vaccine for daughters and the ‘‘interest in learning more about the vaccine’’. All these reviews showed high levels of acceptability and willingness to be vaccinated and also allowing their children to be vaccinated. In order to sustain this acceptability and willingness, recommendations were made to the governments to continue engaging all stakeholders at multiple levels. Governments should increase and sustain education on HPV vaccination for healthcare workers, women, girls and guardians. Governments should continue to maintain vaccine delivery by building upon the infrastructures, such as existing Expanded Programme of Immunization (EPIs) and school-based programs.

A study conducted in rural KwaZulu-Natal (KZN): South Africa by Tathiah et al (2015: 11) indicated the high level of HPV vaccine delivery uptake. It was conducted in 2014 amongst female learners (9-12 years). The high uptake was a result of the effective communication between all stakeholders and close collaboration between, the National Department of Health (NDoH) and the Department of Education (DoE) on national, provincial and district levels; as stipulated in the Integrated School Health Policy (ISHP) of 2012. The involvement of school governing bodies, parents, learners, educators, healthcare workers, community leaders and the media preceding the initiating of vaccination played an important role. This resulted in positive attitudes of parents towards HPV vaccination of their children. As a provision of one of the services of the ISHP is the immunization of children (Integrated School Health Policy 2012: 15). In order to study the HPV vaccine acceptability, Katz, Nkala, Dietrich, Wallace, Bekker, Pollenz and Gray (2013: 4,5) conducted a study in Soweto, South Africa. Findings indicated that the acceptability of the vaccination by the parents was high in areas where there is an abundance of female-headed households. Other influences were the high epidemic of HIV, sexual violence, and poverty. Parents who allowed their daughters to be vaccinated

with the HPV vaccine were motivated by fear of exposure of their children to sexual violence and early sexual debut.

Hoque (2016: 572) investigated the knowledge, attitudes, perceptions of South African doctors. The findings indicated that doctors' consider that it is very important to recommend HPV to patients. Yet, the level of knowledge regarding HPV infections and vaccination among medical doctors was low. The doctors in the study were aware of HPV, and they knew HPV was transmitted sexually and that the HPV vaccine prevented cervical cancer. Many did not perceive that HPV is the most common STI. They were not aware that cervical cancer is caused by HPV-16 and -18. Most doctors could not name both the vaccines (Hoque 2016: 572).

2.7 GAPS IN LITERATURE

There are several studies conducted globally about perceptions of people towards the HPV vaccine, yet there is limited literature about perceptions towards HPV vaccine in South Africa. In South Africa, a national school-based human papillomavirus (HPV) vaccination programme was implemented in the public schools for the first time in 2014. The programme targeted grade four girls aged nine years and above (Delany-Moretlwe, Kelley, James, Scorgie, Subedar, Dlamini, Rees 2018: 425). The reviews prominently covered knowledge and attitude towards cervical cancer and HPV vaccine. A study conducted in the Western Cape (WC) and Gauteng Provinces (GP) of South Africa by Dreyer, van der Merwe, Botha, Snyman, Constant, Visser and Harvey (2016: 912) focused on cervical cancer and offering information about cervical cancer screening among mothers. The study did not include parents' perceptions of the HPV Vaccine (Dreyer et al. 2016: 912). In 2014 the roll-out of HPV vaccine in public schools was initiated. However, there are no documented information on the outcome of the programme in the Tshwane district. There are no published statistics on the number of children immunised. The HPV vaccination roll-out programme is continuing in South Africa. The reported challenges were, difficulties in obtaining informed consent and weakness in the cold chain capacity (Delany-Moretlwe et al. 2018: 425). Learners in most of the schools in Tshwane district are part of the HPV rollout programme. Among the

study reviewed, the researcher did not find any record regarding the perceptions girl children'sparents regarding HPV vaccine roll-out project at schools in Tshwane District.

2.8 CONCLUSION

This chapter gave an overview of the epidemiology of cervical cancer, which is caused by persistent infections from HPV. The chapter also provided an overview regarding the risk factor to HPV infection, the link between HPV and HIV, and the perceptions of individuals from different countries towards the HPV vaccine. Finally, the gaps in literature was identified, which motivated the researcher to conduct the study. The next chapter will focus on how the study was conducted by focusing on research methodology.

CHAPTER 3

RESEARCH METHODODOLOGY

3.1 INTRODUCTION

The previous chapter focused on the literature review process. Several research findings were presented about HPV, HPV vaccination, the link between HPV and Cervical cancer. Furthermore, the chapter presented the perceptions of people towards the HPV vaccine also highlighted the gaps in the literature. This chapter focuses on the methodology that the researcher used to explore and describe in detail the perceptions of parents of girl children regarding the HPV vaccine rollout programme at schools in Tshwane District. It provides a detailed description of the research paradigm, approach, design, setting, population, sample, sampling technique, data collection technique, data collection tool, and data analysis. The chapter also highlighted ethical issues and the measures taken to ensure the trustworthiness of the study.

3.2 RESEARCH PARADIGM

Polit and Beck (2016:738) describe a paradigm as a world view of a natural phenomenon. The researcher followed an interpretivism paradigm. The interpretivism paradigm promotes the idea that subjective thoughts and ideas are valid. It is based on sociology, which attempts to interpret understanding of the social action (Green & Martelli 2015:22). The interpretivism paradigm involves the role of people and how they interact with the phenomenon that is studied. It focus on how people consciously participate in a situation and the meaning they give to it (Botma, Greeff, Mulaudzi & Wright 2016: 42).

Researchers who use the interpretivism paradigm seek to understand the experiences and perceptions of individuals for their data instead of collecting statistics and relying on numbers (Thanh &Thanh 2015: 26). The researcher found an in-depth understanding of the lived experiences of the participants through face to face interviews and participant observations. To facilitate full and honest self-representation from the participant, the

researcher spends about 30 minutes to an hou with each participant. The participants were allowed to talk freely using their own language (Thanh &Thanh 2015: 26).

3.3 RESEARCH APPROACH

The research approach is a set plan to accomplish the research study (Polit & Beck 2016: 743). The researcher has used a qualitative research approach. The qualitative research is concerned with the understanding of a phenomenon as opposed to explanation and tries to subjectively explore reality (de Vos, Strydom, Fouché & Delport 2017: 308). Qualitative researchers focus their research on the experiences and phenomena of human nature using real-life scenarios. The choice of research aproach depends on the research problem. The researcher chose the qualitative aproach because of the view that meaning and understanding best explains the research problem (Brink, Van der Walt & Van Rensburg 2018:3). In this study, the qualitative approach was important as the researcher wanted to explore reality as assembled by individuals. The reality was of perceptions of the parents regarding the HPV vaccination of their girl children at school. Qualitative researchers embrace the assumption that there may be multiple truths. One participant may have a perception completely different from another participant. Qualitative results are accounts of the individual's life and world. The researcher used a qualitative approach. This aproach enabled the researcher to enter and explore the participants' world. Qualitative results reflect the diversity and variation of the perceptions of the parents (Erlingssona & Brysiewicz 2013: 93). The researcher followed the principles of Qualitative research when interviewing the participants' multiple realities were possible. The researcher collected data directly from the participants and interacted with them to gain personal insights and perceptions. The different perceptions were noted as in a qualitative approach, participants should not be reduced to numbers (Erlingssona & Brysiewicz 2013: 94).

During the qualitative interviews, the researcher was committed to the participants' perspectives, giving the right impression of what the participant had expressed. The best approach was qualitative explorative, and the researcher remained committed to this

approach throughout the whole study (Brink et al. 2018:3). There was a little disruption of the phenomenon's natural context. The fact or situation that the parents experienced was observed as it happens. The reporting of the data was done in such a way that the participants' explanations were supported. All the comments of the participant were written as the participant related them (Brink et al. 2018:3). To remain relevant, the researcher adhered to the following key features of the qualitative research approach, as highlighted by Brink et al. (2018: 104).

- conducted the study in a real-life situation.
- The focus was on the process and less of the product.
- Made thorough descriptions of participants' beliefs, actions, and events.
- The findings were understood in their context.
- The research generated further questions.

How these were achieved is explained thoroughly under relevant sections in this chapter.

3.4 RESEARCH DESIGN

The researcher used an exploratory design in order to describe in detail and to give a greater understanding of the girl children's parents perceptions regarding the HPV vaccine roll-out programme at schools in the Tshwane District. An exploratory study begins with a phenomenon and investigates the underlining process of the phenomenon and how it manifests. Exploratory studies explain the 'how' and 'why' of a particular social phenomenon (Mohajan 2018: 23). A qualitative explorative study explores the thoughts and feelings that might affect the way participants respond to care and how it is given (Austin & Sutton 2014: 436). An explorative design was relevant as the researcher wanted to explore in detail the perceptions girl children's percceptions regarding the HPV vaccine rollout programme at the schools in Tshwane district.

The process of explanatory research is that the observed makes more sense to the observer, and ultimately a better explanation is given. It is a gradual expansion of the concepts allowing the researcher to have a better or deeper understanding of the world based on what is already known. Exploration seeks to refine, adapt, or change the initial

explanation (Reiter 2017: 144). To the phenomenon under scrutiny, it takes systematic dedication, critical, open, and self-reflective. Explorative research conducted becomes an instrument of the expansion of knowledge, awareness, and conceptual and intellectual expansion (Reiter 2017:148). The research design guided the choice of research methods.

3.5 RESEARCH METHODS

Research methods covers aspects such as the research setting, sampling process, data collection, and data analysis.

3.5. 1 Research Setting

A research setting is the specific place (location) where the data is collected (Brink et al. 2018:47). The study was conducted at one of the clinics in Soshanguve township, which is one of the biggest townships in the Tshwane District. The population census conducted in 2011 at Soshanguve, which indicated a population of 728 063. Of these, 56.7% were male and 49.3% female. Black African consists of 99.2%. About 0.8% is composed of coloured or other population groups including immigrants. The most spoken language is Tswana 30.8%, and Northern Sotho (Sepedi) 20.5%, the remaining languages, 51,8% spoken are Zulu, Xhosa, Afrikaans, English, Sotho, Tsonga, Venda, South Ndebele, sign languages and other languages which are spoken by immigrants (Statistics South Africa. 2011: 1). In Soshanguve, 58% of residents have tap water inside their homes, 91.9% had electricity and lighting, and access to a flush toilet connected to a sewerage system is 85.3%. (Statistics South Africa 2011: 1). In Soshanguve, 58% of residents had piped water inside their homes, 91.9% had electricity and lighting, and access to a flush toilet connected to a sewerage system is 85.3% (South African Market Insights. 2020: 1). In South Africa, 350,000 Grade 4 girls were vaccinated in more than 16,000 public schools. About 94.6% of schools were reached through HPV vaccination. Aproximately 86.6% of eligible learners were vaccinated. There were no major adverse events detected succeeding immunization (Delany-Moretlwe et al. 2018: 425).

3.5.2 Population of the study

A population is the entire well-defined collection of individuals that is the interest of the scientific query and have similar characteristics (Brink et al. 2018: 116). However, due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming (de Vos 2017: 224). The researchers usually focus on the target population (Botma et al. 2016: 124). The target population of this study consisted parents of girl children who had received the HPV vaccine from the Department of health at one of the primary schools in Soshanguve.

3.5.3 Sampling methods

This section covers the issues of sampling, recruitment of participants, and the sample size.

3.5.3.1 Sampling

Sampling is a process of taking a subset of the designated population to represent the entire (Lo Biondo–Wood & Harper 2010:224). There are two main methods of sampling, which are probability sampling and non-probability sampling. A probability sample is representative of the population where all elements in the population have an equal chance of being included in the sample (Brink et al. 2018:119). In probability sampling, researchers rely on a sampling frame technique that results in representations of the population for an accurate generalization (de Vos 2017. 224). The researcher used non-probability snowballing sampling technique. Only parents whose girl children were recipients of the HPV vaccine during the vaccine roll-out campaign were invited to participate. The sample size was not predetermined; however, the researcher interviewed the parents of girls who received the HPV until data saturation was reached. Data saturation is when there is no new information immerging from further interviews as participants are providing information that has already been said previously by the other participants (Polit & Beck 2012:521).

The focus in sampling is to ensure that the sample selected shows representativeness of the entire target population. A “representativeness” of the sample population reflected the entire population in as many ways as possible (Brink et al. 2018:117). To ensure representativeness, the researcher used key features in inclusion criteria to answer the research question. Inclusion criteria include demographic, clinical, and geographic characteristics. The researcher has ensured that only the participants who meet the inclusion criteria participated. For this study, the researcher used the inclusion criteria were:

- Parents of girl children attending one of the schools in Soshanguve.
- Parents of girl children aged 9-12 years who have received the HPV vaccine.
- Parents of girl children registered to have received the HPV vaccine.
- Parents of girl children who have signed consent that their daughters may be vaccinated before receiving the vaccine.
- Parents of girl children who have signed consent form to participate in the study.

Participants may have all the inclusion criteria but may present with characteristics such as they are difficult or impossible to follow-up, miss scheduled appointments for data collection, and provide inaccurate data (Patino & Ferreira 2018: 84).

Some parents, though they met the above criteria, were excluded based on the following exclusion criteria:

- Parents who were mentally ill.
- Parents who were not staying at Soshanguve though their children attend schools in that townships.
- Parents who would be out of Soshanguve during the data collection period.
- Parents who were unable to speak English or Sepedi.

The above criteria guided the recruitment process.

3.5.3.2 Participants recruitment process

Before the recruitment of the study participants, the ethics clearance was granted by the University of South Africa Research Ethics Committee, Department of Health Studies (Appendix C). After receiving Ethics clearance, permission to conduct the study was requested and obtained from the Primary Health Care Manager: Tshwane Provincial clinics (Appendix B) and from the Manager of the clinic at Soshanguve, where the interviews were conducted (Appendix D). The researcher approached the relevant schools and the school health teams who were involved during the HPV vaccine rollout campaign at schools. This was done to seek assistance regarding where and when the HPV vaccine rollout campaigns have taken place. The parents of children vaccinated were approached. They were asked if they are willing to participate and, if so, to "SMS" a reply to the researcher. The researcher then followed up on the reply and arranged a date and appropriate time to meet the participant, and arrange suitable time to conduct the interview. This approach yielded no results. The researcher then resorted to word of mouth from residence associated with the schools to find appropriate participants who were willing to participate. Initially, only two participants contacted the researcher. Those two participants encouraged other members in the community to participate, and then more participants came forward.

3.4.3.3 Sample

In this study, the sample consisted of 12 parents whose girl children had received the HPV vaccine between the ages of 9-12 years. All the participants were of (Northan Sotho) Sepedi origin. The sample size was determined by data saturation. The sample size is satisfactory when the meanings are clear, and the data is fully explored until saturation (Brink et al. 2018: 128).

3.5.4 Data Collection

Data collection is a systematic gathering of information that is relevant to the research purpose, objectives, and question (Grove, Burns & Gray 2013: 691). Under this section, the researcher presents the data collection instrument and data collection procedure.

3.5.4.1 Data collection instruments

Data collection instruments should be relevant to the data collection method used. For this study, the researcher used the one-to-one individual interview as a data collection method. Interviews on a one-to-one basis is an effective mode of data gathering in qualitative research (Botma, Greeff, Mulaudzi & Wright 2016: 205). In order to successfully conduct an interview, there should be an interview guide which is used as a data collection instrument to guide the interview process (Polit & Beck 2012: 53). The interview guide is to ensure that the entire questions are covered during the interviews (Polit & Beck 2012:537). The interview guide had one open-ended core question, and from that questions, the researcher developed further questions depending on the participants' responses. The initial question developed was piloted through interviewing two parents whose girl children had received the HPV vaccine (Appendix F).

3.5.4. 2 Data collection procedure

Data was collected from 1 August to 31 October 2019. The researcher conducted all the interviews. The process of interviewing requires a level of interpersonal skill and can only be successful if a rapport with the participant is built (Bolderston 2012:68). The participants were first greeted in a friendly manner to ensure that they relaxed. Each interview lasted between 30-45 minutes. The interviews were conducted in a privateroom where there were no disturbance and noise distractions. This was to assure participants that what was discussed during the interviews was important and worthy of their consideration. This privacy was to ensure free communication as the venue was private, intimate, and personal. There was adequate seating space for the participant, the

researcher, and the interviewer to feel comfortable. The cooling or heating of the room was correct to avoid discomfort allowing all the individuals to focus on the task at hand.

The researcher told the participant that she is a master's degree student at the University of South Africa and then requested permission to continue with the interview and waited for a response. The researcher's function during the interview was to encourage participants to tell their stories freely and ataching meaning to their experiences. In exploratory research, it is important for the participants to respond in their own words giving their thoughts, ideas, and perceptions (Bolderston 2012: 68). Interviews were conducted in English. However, for participants not conversant with English, the researcher sourced the assistance of an interpreter who was conversant with Sepedi to assist with interpretation during the interviews (Appendix F-2). An audiotape was used to record the interviews, as the researcher could not remember all the details discussed.

The participants needed to reflect and to recall any further information and not to feel rushed in the interview. The researcher allowed for pauses and times of silence during the interview. Open-ended clarity questions were used in order to encourage the interview process and also to avoid leading the interview. Clarity questions were asked during the interview process to create participants' awareness of the implications of their statements and to stimulate the participants to think deeper. Where necessary, the researcher reflected on content to clarify ideas and statements expressed by the participant. The minimal verbal response was used to communicate with the participant. This gave the participants time to structure their words and thoughts. A less active role was adopted by the researcher to allow the participant to do the talking. Good probing is essential for an interview to be successful (Moerman 2010: 15). The researcher used these techniques in her interviews. The technique which the researcher frequently used was "Humming", that is making a soft response such as saying, 'yes-yes'; 'Yaa-neh', 'o-k" to indicate that the researcher is listening aand also as a means of requesting for expansion and elaboration from the participants' answer. Another strategy used was requesting the participant to be more specific, provide an example of experience, and to express their feelings. Where necessary, the researcher used her facial expression to indicate a lack of comprehension. Paraphrasing, summarising, and reflecting on what the

participant said was another probing approach used to gather more data concerning participants' perceptions regarding the HPV vaccine rollout programme of HPV at the schools in Tshwane District.

Writing fieldnotes was a way to document the work done so that later it can be questioned critically (Thompson 2014:253). Writing field notes by observing, reflecting, and registering emotional responses is a necessary practical and less theoretical task to complete this study (Pacheco-Vega 2019:2) successfully. Observational field notes are drawing inferences about someone's perspective that you couldn't obtain by relying exclusively on interview data. It is the dynamics, activities in the natural research setting (Deggs & Hernandez. 2018: 2555). Observational field notes are the notes that the researcher noted on observing an account of the interview. Observation if the participant was relaxed, they were willing to respond. Although the interviews were tape recorded with the permission of the participants, at the same time the researcher also took field notes. The researcher wrote personal field notes on what she heard, felt and experienced during the interview. Field notes were utilised during the interview process to capture the gestures and non-verbal cues that could not be captured on tape. Before concluding the interviews, each participant was asked if the description of their views was exhausted and that their experiences had the opportunity to be reflected. This was done to ensure the trustworthiness of the data (Polit & Beck 2016:509).

3.5. 5 Data Management

Audio-recorded interviews were transcribed verbatim. The audio recordings were transcribed within 48 hours after each interview. The transcripts were only identified by codes. After all transcript were analysed, they were kept safely under lock and key to ensure confidentiality. All the signed consent forms were kept by the researcher and are kept separately from the transcripts so that people cannot link the names of participants and transcripts.

3.5.6 Data analysis

Data analysis involves clustering together related type of narratives information into coherent schemes. Qualitative data analysis is a process of inductive reasoning and thinking. It is done methodically, sorting, organising, and reducing the data to more manageable data pieces. In qualitative data analysis, researchers create new concepts and theory by blending empirical evidence and abstract concepts. Qualitative data is an ongoing process involving continual reflection of the data, asking analytical questions and records made throughout the study. The interpretation and the presentation of the results must be verified against the literature (Botma et al. 2016: 223, 224, 225). Content analysis was used to analyse data. This was done through coding. Coding is the process of organizing the data into segments to find the meaning of the information (Bothma et al. 2016: 224). The researcher identifies codes and then forms themes (Botma et al. 2016: 222). Qualitative data was broken down into smaller units, then coding and naming of these units according to the content they represent (Polit & Beck 2012:564). The data was coded where each incident was compared to other incidences, and similarities found, from the similarity's themes, were formed (Tie, Birks, & Francis 2019: 4).

The processes of analysis were as follows:

- The researcher made verbatim transcriptions of during the interviews. Soon after the interviews, field notes were made. This was in order to ensure the accuracy of the collected data (Polit & Beck 2016:531).
- Each transcript and fieldnotes were read and re-read in order to code and categorise themes.
- Connections across emergent sub-themes were searched for.
- The sub-themes were then clustered into similar themes.
- The themes were then clustered into superordinate themes, themes and sub-themes
- A table was developed of themes, super-ordinate themes, sub-themes, and quotes from the transcripts.
- The transcribed interviews were also analysed by an independent coder who is an expert in qualitative data to ensure conformability. This was done to ensure the

reliability of the coding, as Brink et al. (2018:158) mention that having another person coding the same data and then by checking for agreement

- Four super-ordinate themes emerged from the data analysis namely: Communication of the programme, motivation for allowing their children to be immunized, response to immunization, and suggested ways of enhancing the programme. These themes are discussed in chapter four with participants' narratives extracts.

3.6 TRUSTWORTHINESS OF THE STUDY

Demonstration of trustworthiness of data collection is one aspect that supports the researcher's confidence in the research's findings. The researcher has strived to maintain the trustworthiness of the study by adhering to the following criteria of ensuring the rigour of a qualitative study identified by credibility, dependability, confirmability, transferability, and authenticity (Polit & Beck 2016:559).

3.6.1 Credibility

Credibility entails evaluating integrity and quality in qualitative studies to ensure confidence in the truth of the data (Polit & Beck 2012: 724). Credibility of the study ensure that the conclusions are accurate and based on the participants involved in the study. It also involves checking whether the findings are making sense and convincing and plausible to the reader (Yilmaz 2013: 319). In this study, the researcher did member checking through summarising the participant's words in the interview, then ask whether that was what the participant is saying. In this way, the answers were validated through feedback given. Member checking assisted the participants in correcting the mistakes and misunderstanding, which assisted the researcher in having correct understanding and interpretation of information provided. This conforms to what Holloway and Wheeler (2010: 305-306) document saying that through member checking, misinterpretations and misunderstandings can be avoided. Credibility was also maintained by prolonged engagement. Botma et al. (216: 217) describe prolonged engagement as spending adequate time observing various aspects of the setting, understanding the culture, social

setting, or phenomenon of interest. To achieve this, the researcher spends adequate time with participants when collecting data and through listening to the audio recorded interview several times and reading and re-reading transcripts to be fully engaged with data. The researcher also practiced reflexivity. Palaganas, Sanchez, Molintas and Caricativo (2017:436) mention that the researcher's own reflexivity is where the researcher emerges with new understandings through what was learned or unlearnt in the course of listening and participation in the study and this brings about the credibility of the study. To achieve this, the researcher listened attentively to the information narrated by the participants in relation to their perceptions and learned a lot about the HPV vaccination and also some of the HPV vaccine side-effects which the researcher was not aware of.

3.6.2 Dependability

Dependability refers to evidence that the findings are consistent and stable over time and under different conditions (Polit & Beck 2012: 175). Dependability is concerned with whether the same results would be observed if applied in an almost similar context (Polit & Beck 2012: 585). To ensure dependability, the researcher has provided detailed steps regarding methods used for sampling, data collection and data analysis. The researcher also described the setting and provided inclusion and exclusion criteria of the participants. Furthermore, the interview guide used for data collection is also attached as an appendix. This will ensure that if the study would be replicated in almost similar settings it is likely that same results might be observed.

3.6.3 Conformability

Conformability refers to the objectivity of the study, its possibility for similarities between two or more independent people about the data's accuracy, not the researcher's biases, motivations or perceptions (Elo, Kääriäinen, Kanste, Pölkki, Utriainen, Kyngäs, 2014: 2). The study must not be distorted by emotions of the researcher. The research process must reflect the words of the participants. The data represented should be the information

provided by the participants. The researcher must not change or correct any statements of the participant (Polit & Beck 2012: 175, 585). The researcher showed neutrality and the findings of a study shaped by the participant and not the researcher (Erlingssona & Brysiewicz 2013: 94). In order to be not biased in the research, there must be unprejudiced consideration of a question. It is encouraging the preferable answer over another (Pannucci & Wilkins 2010: 619). In this study, the researcher suspends her own perceptions regarding HPV vaccine rollout to avoid influencing participants' responses. The researcher also used open ended question to avoid leading the participants to answer on a specific question. Interviews were audio recorded and transcribed verbatim to ensure that it reflects the reflection of the participants. Transcripts were given to an independent coder who coded the data and came up with the themes without previewing the researcher's themes. The presentation of the findings is backed up with direct quotations from the participants. The copy of audio recordings is kept safe in case one of the authorised people such as the study supervisor want to verify the transcripts with the original interviews.

3.6.4 Transferability

Transferability is the degree to which the results of qualitative research can be transferred to other contexts and other areas in the field of study (Anney 2014: 277). In this study, the researcher provided a full description of the research situation and the methods used in the study. The results of this study can be applied or transferred to other similar contexts and situations. The knowledge acquired in this study might be relevant to a similar context.

3.6.5 Authenticity

Authenticity is the lengths to which the researcher goes to faithfully show a range of different realities (Bothma et al. 2016: 234). The researcher portrayed the perceptions of the participants regarding the HPV vaccine through the audio recording of interviews, writing of field notes, and using verbatim quotations from participants when presenting

the results. An independent coder re-coded the results. The verbatim transcripts and audio recordings are kept safe and can be requested by an authorised person in case there is a need for validating the results.

3.7 ETHICAL CONSIDERATIONS

Ethics is a system of moral values that focus in the extent to which the researcher adheres to professional, legal, and social obligations when conducting the study and interacting with human participants (Polit & Beck 2016:727). The researcher applied the following ethical principles:

3.7.1 Protection of institutional rights

Before the commencement of the study, a research proposal to conduct the study was submitted to the Department of Health Studies, University of South Africa Research Ethics Committee for ethical clearance, and approval was granted (Appendix C). After that, permission for this research was granted from the PHC manager of the Tshwane Provincial Clinics (Appendix A). Permission was then granted from the manager of the relevant clinics at Soshanguve, in Tshwane District (Appendix D).

3.7.2 Informed consent

Informed consent is centered around respecting the autonomy of an individual in making their decision whether to participate in the study or not (Dos Santos & Cosac 2017: 19). The researcher protected the autonomy of all the participants. Autonomy is the ability of an individual to decide for themselves based on the possibilities presented to them. To be autonomous, human beings must make decisions considering their own principles, values, beliefs, and perceptions. Therefore, respect for autonomy involves considering all factors that inhibit the ability of the individual to make their own decisions (Dos Santos

& Cosac 2017: 19). The participants were given relevant information before they make their decision. The information given include aspects of confidentiality. The researcher respects that individuals and ensure that they make their own informed decisions about whether to participate in research. They have the right to or not to participate in the study without any consequences. They have the right to withdraw at any time, refuse to give information or ask for clarification about the study. The participants were assured that that the researcher will respect their decision, and any coercion to participate was avoided (Brink et al. 2018: 30). Informed consent was obtained from each participant once the researcher has informed and explained to the participant about the study (Appendix G). All the participants who have consented to participate, have signed the consent form.

3.7.3 Beneficence

Beneficence is an act of charity, mercy, and kindness with a strong association of doing good to others and protect participants (Kinsinger 2009: 46). Health professionals and the researcher are obligated to act in a beneficent manner (Kinsinger 2009: 46). The purpose of health research is to discover new information that would be helpful to society. To achieve that, the researcher only focusses on the information related to the research with no purpose to hurt anyone or find out information at the expense of other people. The researcher followed an interview guide (Appendix F) The researcher also protected the participant from any discomfort and harm, whether physical, psychological, emotional, economic, social or legal by ensuring that interviews are conducted at the nearest clinic where the participants will not incur any financial cost for traveling. The use of the clinic was also convenient in case one of the participants feel emotionally disturbed as there are counsellors who could offer emotional support. The researcher used the open-ended question when conducting interviews and was not judgmental. During the interview process, the researcher carefully monitored any nonverbal behaviour and mannerism indicating stress by the participant, and if any of the signs where observed, then the interviewer would have stop proving, discontinue the interview and refer the participants

for counselling if there is a need or through participant's consent. After the interview, were participant had some misinformation, they were given correct information. Those participants who highlighted that their children have experienced certain side effects which need intervention, they were referred to the clinic for further intervention. All these were done to avoid harm and to ensure that at least the participants directly benefit from participating in the study.

3.7.4 Principle of Justice

This principle deals with the concept of fairness, ensuring that all research participants are treated fairly and equally. Participants selected should only be selected based on the research problem (Owonikoko 2013: 242) The participants were selected because of being the parents of a child who has received the HPV vaccine and who have given consent for their child to receive the vaccine from the Department of Health, received at the school. The research participant has the right to expect that their identities and information collected from or about them will remain anonymous and confidential. (Brink et al. 2018:30). The researcher used codes and not participants' names to ensure anonymity. During recruitment and data collection, the researcher introduced herself to the participants, informing them that she is a student at the University of South Africa pursuing her master's degree in the Department of Health Studies. The nature and purpose of the study were also explained to the participants. In addition, the participants' rights and how they could benefit from the study were also explained (Annexure E).

3.7.5 Confidentiality

Polit and Beck (2016:147) refer to confidentiality as ensuring that the information that is provided by participants, especially sensitive and personal information is protected and not made available to anyone other than the researcher. The researcher assured participants that their information would be kept safe and in the strictest confidence. The information would be disclosed only if the participant permits. The researcher and the interpreter have signed a confidentiality binding form indicating their responsibilities to

maintain confidentiality regarding information shared with the parents/guardians of the girl children who participated in the HPV vaccination campaign. In the course of the research project, the names and other identifying information about the study site, and participants are completely confidential. Information obtained in the course of this research project will not be divulged to unauthorized persons or the public. The researcher will not ask questions of study participants for her own personal information but only to the extent of the assigned duties of the research project.

3.7.6 Respect for human dignity

Human dignity entails “recognition of the inherent dignity and the equal and inalienable rights of all members of the human family. It is the foundation of freedom, justice, and peace in the world.” (Caulfield & Chapman 2005: 0736). Respect for human dignity includes the right to self-determination and the right to full disclosure. Self-determination means that the participant can voluntarily decide whether to take part in a study without the risk of being treated in a prejudiced manner. Full disclosure involves the researcher fully describing the nature of the study to the participant and allowing the person to refuse participation and disclosing all the risks and benefits (Polit & Beck 2016:140). The researcher was respectful to the participants. She ensure that she greated them in a respectful manner and informed them exactly the purpose and process of the interview. Only information relevant to research was asked. The researcher where given autonomy and freedom to choose if they want to participate and also to withdraw anytime if they no longer want to continue with the study.

3.7.7 The right to Privacy

Privacy means that the researcher has a duty to ensure that information concerning their participants remains confidential. The right to privacy involves autonomy over personal information (Botha et al. 2016: 13). Privacy is maintained continuously; the participants' data is kept in strictest confidence. (Polit & Beck 2016:121). Interviews were conducted in a safe and private consulting room in the clinic, and no other people could not hear the

conversations. The participants were interviewed alone. The names of the participants were not used; the researcher used numbering codes when referring to the individual participant. Privacy is ensuring that the researched information, which is personal and makes the personally identifiable, is not shared with any person or people known to the participants.

3.8 CONCLUSION

This chapter described the research design and methodology employed by the researcher in carrying out the study. The chapter discussed the instrument used for data collection, the procedure for data collection, and analysis. Ethical considerations of the study and measures to ensure trustworthiness were also discussed. The next chapter will present the results according to the themes that emerged from data analysis.

CHAPTER 4

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 INTRODUCTION

Chapter three focused on the methodology used in exploring the perceptions of girl children's parents regarding the HPV vaccine rollout programme at the schools in Tshwane District. A detailed description of the research design, population, sample, sampling technique, data collection technique, data collection tool, and data analysis, as well as the ethical considerations undertaken by the researcher in the execution of this study, were discussed. Measures taken to ensure the trustworthiness of the collected data and ethical considerations were also discussed. This chapter presents the findings that emerged from data analysis. The first section of this chapter describes the demographic data of the 12 participants, while the second section presents the results according to super-ordinate themes and subthemes derived from data analysis.

4.2 DEMOGRAPHIC DATA OF THE PARTICIPANTS

To strengthen the extent to which findings are transferable, the researcher should provide demographic data of the study participants, as is shown in Table 4.1 (Polit & Beck 2016:560). This section deals with the information concerning the demography of the study participants that are displayed in table 4.1. The names of the participants were not used in the study, participants were referred to as P1, P2, up to P12. The information included was the participants: age, the gender of parents, home language, and if the participant was employed or not. This was provided so that the readers would understand the sources of the data.

Table 4.1 Demographic data of the participants

Participants	Age	Gender	Home language	Employment
P1	43	Female	Sepedi	working
P2	38	Female	Sepedi	housewife
P3	29	Female	Sepedi	working
P4	49	Male	Sepedi	working
P5	36	Female	Sepedi	working
P6	52	Male	Sepedi	working
P7	29	Female	Sepedi	working
P8	35	Male	Sepedi	working
P9	41	Female	Sepedi	working
P10	28	Female	Sepedi	housewife
P11	34	Female	Sepedi	Working
P12	30	Female	Sepedi	Working

In this study, all participants were parents of girl children who had received the HPV vaccine at the primary school that they attend in Tshwane, District. All the girls were immunised in grade four and were between the ages of 9-12 years.

4.3 PRESENTATION OF THE RESULTS

This section focusses on the results. The table below (Table 4.2) presents an overview of the results based on superordinate themes, themes, and sub-themes that emerged from the analysis of the interview transcripts and field notes. Four superordinate themes were drawn from data analysis as the perceptions of parents of girl children regarding HPV vaccine roll-out at schools in Tshwane District.

Table 4.2 Summary of the results

Superordinate theme	Theme	Sub-theme
4.3.1 Communication of the programme	***4.3.1.1 Means of communication***	4.3.1.1.1 Letter
		4.3.1.1.2 Radio
		4.3.1.1.3 Learners
	4.3.1.2 Language used	4.3.1.2.1 Use of English
		4.3.1.2.2 Use of health terms
	4.3.1.3 Type of information	4.3.1.3.1 No information
		4.3.1.3.2 Misinformation
		4.3.1.3.3 Incomplete information
		4.3.1.3.4 Well informed
4.3.2 Motivation for allowing their children to be immunized	***4.3.2.1 Trusting relationship***	4.3.2.1.1 Trusting the principal
		4.3.2.1.2 Trusting the school
		4.3.2.1.3 Trusting the Governance
		4.3.2.1.4 Confidence in nurses
	4.3.2.2 Relieve from going to the clinic	4.3.2.2.1 Negative attitude of nurses
		4.3.2.2.2 Averting payment
		4.3.2.2.3. Time-saving
		4.3.2.2.4. Peer support for learners
	4.3.2.3 Knowledge of the disease	4.3.2.3.1 Suffered from cancer
		4.3.2.3.2 Having relatives who had cancer
		4.3.2.3.3 Correct information
4.3.3 Response to immunisation	***4.3.3.1 Emotional Response of the parents***	4.3.3.1.1 Appreciative
		4.3.3.1.2 Happy
		4.3.3.1.3 Worried
	4.3.3.2 Learners physical response/reaction to the immunisation	4.3.3.2.1 No side effect
		4.3.3.2.2Mild pain
		4.3.3.2.3Affecting menstruation
		4.3.3.2.4Enhanced Health

4.3.4 Suggested ways of enhancing the programme	***4.3.4.1 Use of contextual, relevant language***	4.3.4.1.1 Use home language of participants
		4.3.4.1.2Use of simple non-medical language
	4.3.4.2 Improved means of communication	4.3.4.2.1 Awareness campaigns
		4.3.4.2.2Giving full information to learners
		4.3.4.2.3 Inviting parents for face to face information
	4.3.4.3 Immunization time	4.3.4.3.1 Immunization during the weekends

The four superordinate themes, as presented in the table above, are as follows: a) Communication of the programme, b) Motivation for allowing their children to be immunized. c) Response to immunisation, d) Suggested ways of enhancing the programme

4.3.1 Communication of the programme

This superordinate theme focuses on how the HPV rollout programme was communicated to the parents/guardian. It is composed of three themes, namely: means of communication, language used, type of information provided.

4.3.1.1 Means of communication

This theme highlights means of communication that were used by community health caregivers, the National Department of Health (NDoH), the Departments of Basic Education (DBE) to communicate to the parents about the HPV vaccine campaign. Participants identified the following three modes, which was utilised for providing the information: Letters, Radio and Learners.

4.3.1.1.1 Letters

Participants mentioned that the only time they became aware of the HPV vaccine was when their girl children brought letters from school with the information about the campaign. The letter was accompanied with the consent form which parents were expected to sign. This is indicated by the following quotations from participants transcripts:

> *"The school sent the letter with my daughter. I had to sign the letter, and I had to read the letter because I had to write some things in the letter. I had to write the date of birth and other things related to my daughter. That is how I know that my child is going to get an injection for HPV at school." (P10).*

> *"At school, they gave us a consent form. The consent said that starting from grade four, or from nine years, all the girls are going to get an injection to prevent cancer". (P7).*

Some participants showed an appreciation of a letter due to its convenience because they were not expected to go to school as parents. This was indicated in the following quotation:

> *"They gave a letter to us from school. The letter made it convenient because I knock off from work at six O'clock. It would be difficult for me to go to school as it meant that I should take a leave from work. But because they send a letter, I could sign the letter and give permission and give it back to my daughter to take to school. I did not have to go to school". (P2)*

4.3.1.1.2 Radio

Another way how participants knew about the HPV roll-out campaign was through the media. The mainly used media was the radio. Participants mentioned that they became aware of the HPV vaccine and the vaccine campaign, which is happening at school by listening to the radio.

"I heard about the HPV through the radio. There was an awareness talk on the radio, and they explained about HPV and also about the Government campaign to give the injection at schools. They encouraged mothers to be free to sign the consent and send their daughters to school to have the injection" (P1)

Some of the participants appreciated communication being imparted through the radio through the following statement:

"We heard about the HPV vaccine from the school and the media. So as parents, we understand the HPV better now. We also understand more now how dangerous cervical cancer is".

4.3.1.1.3 Learners

Apart from getting information through radio or letters, some of the parents heard information through their children. So, the schools gave information to learners so that they should send messages to their parents and guardians. Using learners as a means of sending HPV immunisation rollout programme to their parents:

"I had no problem with HPV. The child was told at school that they were going to have the injection. They told the children that it was against cancer. The child was fine about it. She did not mind, so she came and tell me that there were told at schools to tell tour parents that we shall get an injection to protect us." (P9).

Besides the means of communication, results also highlighted the language used.

4.3.1.2 Language used

This theme describes how the use of language and heath terminology influenced participants' perceptions of the HPV Vaccine campaign at schools in Tshwane District. The theme is composed of the following sub-themes: use of English language and use of health terms

4.3.1.2.1 Use of English language,

Results indicate that participants were not happy because of the language used while they were informed about the HPV campaigns. The participant's concern was that letters and informed consent were written in English. They feel that they would have been more informed about the HPV Vaccine if the information letter had been written in their mother tongue. This was captured in the following excerpt from one of the participants:

> *"The child came back with a letter written in English. There were many words that I did not even understand. I just signed the form. I think it would have been better if the letter was not written in English, because I do not read English well. My language is Sepedi". (P10).*

Besides the use of English, the terms used in communication were also raised by the participants as an issue.

4.3.1.2.2 Use of health terms

Results indicate that participants have an issue in the terms used in the letter. They mentioned that the letter was written using health terms. The health terms used in the information letter misguided some of the participants, as shown by the following quotation:

> *When I was reading a letter, I was so happy. After all, I saw the word "prevention" That made me so happy because I was sure that my daughter is going to get an injection and will not fall pregnant if she is protected by the injection, and so she will not fall pregnant. The other what-what- what written in the letter I did not understand but injection I know. (P4).*

Another participant commented in this manner:

> *"The letter talks something about "prevention," so I want my daughter to have prevention and not to have a teenage pregnancy. I gave them permission to inject*

her. You know, these days girls fall pregnant when they are young because they grow bigger than their years". (P6).

The other participant was so explicit about the health language used in the letter, as indicated below:

"I did not appreciate that the form was written using health terminology. T*he form was written a lot of health language. Even though I understand English, I am not a nurse or a doctor. The terms used were like is written to people who work in the hospitals". (P1).*

4.3.1.3 Type of information

This theme explains the type of information that participants had regarding the HPV vaccine. It was either they had no information, misinformed, or had incomplete information.

4.3.1.3.1 No information

This sub-theme discloses that some participants had no information regarding the HPV vaccine or why their children were receiving the vaccine.

"I just accepted that the child should be injected. I am not sure what the injection was for. I did not have any information. I know what the injection is going to do to her. " (P1).

"I only heard about this from the school. I never heard about it before anywhere. I did not know the reason they do it". (P12).

Besides the fact that other participants did not have the information, others have the wrong information.

4.3.1.3.2 Misinformation

A few of the participants had misinformed about the HPV vaccine and had completely misunderstood the reason for the vaccine. They had briefly looked at the information letter and had made assumptions, yet they were still content to allow their children to be immunised.

> *"I was not sure what the injection was for; I think it was to ensure that my child does not get HIV or TB." (P4)*

> *"I read the start of the letter, then I see it is for a health concern, and I know that is good, so I jump to sign. It talks about prevention, so I want my daughter to have prevention and not to have teenage pregnancy". (6).*

> *"They said it was for different diseases, to check the eyesight, maybe for diarrhea. I was not so sure, but I know at the school they always give our children good injections to protect our children". (P1).*

> *"The injection was to prevent the child from getting the disease. Many diseases can make the children sick". (P8)*

Apart from misinformation, some of the participants have incomplete information.

4.3.1.3.3 Incomplete information

A lot of the participants had information about the vaccine, yet the information was incomplete. They understood that it was to prevent a disease or cancer, but they did not know that it was to specifically prevent cervical cancer. This is indicated in the following statements:

> *"The sister at the school told her that the vaccination was to prevent cancer, But I do not know which cancer is being protected." (P9).*

“It is the best for our girl children because it will prevent them from getting cancer. Prevention of cancer is the best way.”. (P7).

While other participants have either limited information or no information at all, some of the participants have correct and full information regarding the HPV vaccination programme and its use.

4.3.1.3.4 Well informed

Some of the participants were well informed about the HPV vaccine and the real aim of providing the vaccine to young girls. They gave consent based on the correct information and expressed exactly what the vaccination was for.

“I signed the form before I know that the girls were going to receive the HPV vaccine, which is going to prevent them from getting cervical cancer.” (P3)

“The HPV vaccine is used to prevent girls from being infected by the HPV virus, which in turn will prevent them from getting cervical cancer as the HPV virus causes cervical cancer.” (P11)

Regardless of the mode of communication, the language used, and the type of information parents have, they still allowed their children to receive the HPV vaccine at school.

4.3.2 Motivation for allowing their children to be immunized

This superordinate theme focus’ on what motivated the parents to allow their children to be immunised. Under this superordinate theme, there are three themes, namely: trusting relationships, relieved from going to the clinic, and knowledge of the disease.

4.3.2.1 Trusting relationship

This theme is about the trust relationship that the parents had towards the authorities that were responsible for administering the vaccine. The trust they had is on the principal, the school, the government, and the confidence they had in nurses.

4.3.2.1.1 Trusting the principal

Most of the parents, even though they did not have adequate information regarding HPV vaccination, they allowed their children to be vaccinated. The participants felt that the principal l was a responsible authority and accountable for how they managed their children in this aspect.

> *"I was glad she had it at the school because the principal will not allow anyone just to come. The principal is accountable, so he will not allow the wrong people to come and give our children the wrong stuff. So we e are putting the lives of our children in their hands. (P1).*
>
> *"If something went wrong with the immunisation, then I can go back to the school and confront the principal. The principal is the one that is responsible. He is the one who authorised the teachers to give out the letters. He is the one who allowed people to give the injection to our children". (P10).*

Apart from trusting the principal, the participants also indicated their trust in the school.

4.3.2.1.2 Trusting the school

All the participants were happy to have their children immunised at the school. The reason was that the children had previous immunisations given at school. The children had been given immunisations at seven years of age through the school immunisation programme. It was expected from the parents that the immunisation programme continues through the school. The other reason for being excited when the injection is given at school is that

learners will not be isolated, and being in a group act as a support to most children who would not feel comfortable if they were injected alone.

> *"It is better at the school (referring to the administration of the HPV vaccination). It is better than all the children are together, and they all have the injection. If we were asked to come to the clinic, then only a few would come, just a few like five children, then my daughter would not like it because she wants to be with all her friends". (P6).*

> *"It is right that the vaccination takes place at the school with all the other children. My daughter, if she were alone, would refuse to have the injection because she would say, why only me?" (P3).*

> *"It is the responsibility of the school to ensure that learners get the injections at the school." (P7).*

The other motivator was the trust the parents have on the government.

4.3.2.1.3 Trusting the government

Most of the participants trusted the vaccination programme and trusted the decisions regarding the programme. Participants felt it was the government's responsibility to do so. They had experience with the good intention of the government when their children were younger and had received vaccination according to the Road to Health Chart.

> ***"****I trust the government because they know immunising the children at a certain age. They know what the children need to get at a specific age. This is what they did throughout when my daughter is too young. The clinic chart is written to prevent the disease. I know that if the government is involved, it is for the good of my child". (P5).*

> *"I was relieved because it is from the government, and I trust the government. The government cannot kill our children. I was not even hesitant to sign". (P2).*

“They do research every day (referring to the government), so they are always bringing out something new. So, if they say there is something for the girls from 9 to 11 years, then it is something important and something good. (P12)

The other factor that motivated the participants to allow their daughters to get HPV immunisation at school is the confidence they have on nurses.

4.3.2.1.4 Confidence in nurses

Having confidence in the service provider is key to building trust. In this study, results indicate that participants gave their children permission to be immunized.

“I was comfortable that it is at the school because the nurses are there to help my daughter. If something went wrong, then I can go back to the school, and the school can send the child to the nurses who were responsible for giving the injection to the children, and they will know what to do”. (P9).

A mother who was not working during the week attended the school when the children were immunised and were treated with respect by the health care workers.

I was impressed because the sisters introduced themselves; they were wearing name badges. The sisters were inviting and happy to talk to you.” (P1).

The other motivator for signing the consent form for the children to get HPV vaccination at school is the fact that parents will not be expected to go to the clinics.

4.3.2.2 Relieve from going to the clinic

Participants were excited that the HPV vaccine is provided at school, not at the clinics. The excitement about the vaccination not given at school was based on the following: the negative attitude of nurses, averting payment, time-saving, and peer support for learners.

4.3.2.2.1 Negative attitude of nurses

Results indicate that some participants were not comfortable taking their children to the clinic, which make them appreciate the HPV vaccine provided at schools. The reason for not wanting to go to the clinic due to the negative attitude of nurses. This was confirmed by the following statement from one of the participants:

> *"I am glad that the injection is given at school. I do not want to go to the clinic again. Sometimes the sisters are very harsh, but I trust the government. I am relieved she had it at the school, and I trust the school". (P2).*

4.3.2.2.2 Averting payment

Other participants were happy that their children are immunised at the clinic for financial purposes. Participants appreciated that the vaccination was done and paid by the government as they could not afford to pay themselves. Participants felt that the vaccination was the financial responsibility of the government.

> *"If you had to go to a private doctor, then it would be too expensive, and the mothers would not be able to take their children. But at school, it is free of charge. The cost is covered by the government" (P4).*

4.3.2.2.3. Time-saving

For other participants, the provision of HPV vaccination at school was the best option as compared to the clinics. The participants were appreciative that the vaccination was done at the school, and they did not have to take their child to a doctor or clinic; this was a great time saver for them. The following statements supported this:

> *"At the school, there is no queue and waiting like the clinic. We are not even expected to be there as parents. This saves our time of having to spend the whole day at the clinic just for an injection". (P2)*

"The school is a good facility to give the injections—a good place to have the campaign. I don't have to take my child to the clinic because they do it at the school'. (P8)

"It is easier for my wife and me. We don't have to take time off work. Everything is arranged". (P8)

4.3.2.2.4. Peer support for learners

Results indicated that providing HPV at school acted as peer support for girls. Peer support was very important to the girl children at that specific age as they wanted to do what the friends are doing. Immunising the learners together at school increased the uptake of the HPV Vaccine.

"My daughter was with the other children, so she was fine; she does not like to be alone." (P2).

"My daughter if she were alone, she would refuse to have the injection because she would say why only me. She was fine. She did not mind because she was in the group with the other girls". (P5)

"It is better than all the children are together, and they all have the injection. If we were asked to come to the clinic, then only a few would come. Some children would not even accept to be injected. It would have been tough. But because they were in a group, everyone wanted to be brave so that the friends will not laugh at them". (P6)

One of the factors that motivated parents to provide consent for vaccination was knowledge of cancer.

4.3.2.3 Knowledge of the disease

This theme focuses on knowledge of the disease as one of the factors which motivated mothers and guardian to allow their girl children to receive HPV vaccine. The knowledge

of cancer was acquired in different ways, including personal suffering from cancer and knowing relative who had cancer.

4.3.2.3.1 Suffered from cancer

It was very important for some of their children to be vaccinated against cervical cancer through the use of the HPV vaccine. One of the participants had had cervical cancer. This experience influenced her to give consent for her child to be vaccinated and also to encourage other mothers to ensure that their daughters were vaccinated.

> *"I had cervical cancer. I was experiencing abdominal pains, so I went to the clinic. At the clinic, the sister said I should do a Pap smear. I did that. Later the sister said I come back and that there was a problem. They referred me to the gynaecologist. I was told that I have cancer, and they removed my womb and put me on chemotherapy. I do not want my child or anybody to go through what I have experienced. That is why I immediately signed the paper and allow my daughter to be vaccinated. I also encouraged other parents to allow their children to be vaccinated.". (P3).*

4.3.2.3.2 Having relatives who had cancer

Participants who had experienced cancer in the family were especially receptive of the HPV vaccine, and they recognised the importance of prevention of cancer.

> *"My grandmother died of cancer, over there (pointing to the lower abdominal pelvic area). She became very sick, and before she died, she was very thin and in severe pain. I was even praying for her to die, seeing the way she was suffering. I am happy that my daughter won't get cancer". (P2)*
>
> *"In our family, we have people who have passed away from cancer. This has made me very worried and sad, so I don't want my daughter to get cancer. So maybe if there had been cancer prevention, then cancer could have been prevented in my family". (P12)*

4.3.3 Response to immunisation

This superordinate theme focuses on the response to vaccination. It covers two subthemes, namely, the emotional response of the parents and the learner's physical response/reaction to the immunisation.

4.3.3.1 Emotional Response of the parents

This theme focuses on how the parents responded to the involvement of their girl children in the HPV vaccination campaign. The parents showed various emotional responses. The response includes appreciation, happiness, worry, and anxiety.

4.3.3.1.1 Appreciative

The participants appreciated and recognised the importance of the work the sisters were doing regarding their children. The vaccination was an opportunity for the sisters to check all aspects of their child's health.

> "*The positive thing about the campaign is that the school sisters (Nurses) don't just do what they came for, to do the vaccination. They also observe other things. For instance, when they came for the vaccination. It was a neighbour's child; they saw that the child was not mentally balanced, so they were able to refer the mother to a place where the child could get help. My sister's son, when they had a vaccination campaign at the school, was referred to another hospital because they found out that he had bilharzia". (P1).*
>
> *"I was very grateful that they have an injection. I want to meet the people who gave the injections to say thank you for protecting against cancer"? (P2)*

4.3.3.1.2 Happy

Most of the participants were happy that their children had the opportunity to receive the vaccination as they felt that it was part of the immunisation programme and that the process was being followed.

> *"I am happy that the Department of Health gives it to the girls. The children must follow the vaccination programme. It is the responsibility of the school and the government to do the injections at the school". (P7)*

> *"It is good, and I am happy for her, I think it will prevent her from cancer in the future when she grows up. I was happy that they gave the injection, many diseases can make the children sick, so I am glad that the government is doing this". (P8).*

4.3.3.1.3 Worried

While other participants were happy and appreciating the fact that their children are given an injection, few participants were worried about the effect the vaccination would have on their child in the future.

> *"I am still concerned that the injection will make the period pains worse when she gets older. I am scared it will make things worse for my daughter when she grows older. My child may even end up not giving birth because of this injection". (P5).*

4.3.3.2 Learners physical response/reaction to the immunisation

This subtheme describes the physical response and reaction of learners to the HPV immunisation. The reaction ranges from no side-effects, pain, affecting menstruation, and enhanced health.

4.3.3.2.1 No side effect

Some parents mentioned that their children did not talk about any side effects following HPV vaccination. When asked by their parents, they reported that they were well. This is shown by the following quotations:

> *"Nothing happens to my child after the injection. She did not complain about anything. There were no problems" (P1).*
>
> *"Nothing happened to my child; she was fine; she did not complain of anything; she was just fine as if nothing happens." (P5)*
>
> *"There were no complications when she came home from the school after having the injection, and to this day, there are no complications she plays and is happy and healthy and strong." (P8).*

4.3.3.2.2 Pain

Though other parents reported that their children did not experience any untoward reaction after HPV vaccination, some parents mention that their children have experienced pain as shown by the following statements:

> *"My daughter did not have any major problem. She just complained about the pain in the arm where the injection was given. The arm was painful for 3-4 days. After that, she stopped complaining,". (2).*
>
> *" My daughter said that the injection was very painful, but It only hurt for five minutes, then there was a little blood, and then she was fine. She mentioned that she wanted to cry because of pain but ashamed that other learners with a laugh at her". (P4)*

4.3.3.2.3 Affecting menstruation

Other parents mentioned that the HPV vaccine has an impact on menstruation. This was indicated in the following excerpts:

> "*She started the menstruation just after she was vaccinated. I was amazed that my child started menstruating at 12 years, then it stopped after three months it started again. I don't know if it has anything to do with the injection or not." (P5).*
>
> *"My daughter started in her periods. I don't know if it is time to start the periods. She started her periods at the same time as she received the injection. I started my periods also at 12 years. I do not know if it is the injection that started the periods. It may be the injection, or it may be that the child is growing" (P12).*

4.3.3.2.4 Enhanced Health

Though other parents were worried about the injection's effect on their children, other participants mentioned that the injection enhanced their children's health.

> *"Since my daughter had an injection, her health improved. She used to have nose bleeding (epistaxis). But since that day she was given an injection, she is very well. She even plays in the sun and never bleeds. She looks very healthy and fresh.". (P3)*

4.3.4 Suggested ways of enhancing the programme

Participants did not only raise the concerns but also came up with the suggestion to address some of the concerns raised. The following superordinate focuses on the suggestion made to enhance the HPV vaccination roll-out at schools. It is composed of the following themes: use of contextual, relevant language, improved means of communication, and immunisation time.

4.3.4.1 Use of contextual, relevant language

Participants raised issues regarding the language used in communicating the campaign. The language on the information sheet and consent form was difficult to understand as it was not written in the participants' home language. The participants picked out the words they could understand and made conclusions on that. The language was not contextual and relevant to them. To address that, participants suggested the uses of participants' home language and the use of simple non-medical language.

4.3.4.1.1 Use home language of participants

Participants suggested that the information material and consent form should be written using home language instead of English to avoid misunderstanding.

> *"I suggest that they should use Sepedi in their material. We are not English people. We understand Sepedi. The school is not an English school as all children are also from the township. If they use our language, we shall understand better". (P3)*

4.3.4.1.2 Use of simple non-medical language

The language used on the information letter and consent form was medical terminology. Many parents confessed that they did not read the letters. It appears that it was too complicated for them.

> *"They should use simple English. This will make it easy for people to understand. This will make many parents understand about the HPV vaccine and the reason for giving it". (12).*

4.3.4.2 Improved means of communication

This theme is about improving the means of communication as some participants felt that there are some shortcoming related to the means of communication used. The suggested

means of communication are awareness campaigns, provision of full information to learners, and inviting parents to school.

4.3.4.2.1 Awareness campaigns

Participants advocated for the improved awareness campaign. The awareness talks on the radio appeared to be where most of the participants became aware and knowledgeable of the HPV vaccine programme.

> *"There was an awareness talk on the radio, and they explained and encouraged mothers to be free to sign the consent and send their daughters to school to have the injection. The campaign should be done after every news, especially on TV in the evening when people are at home". (P1)*

4.3.4.2.2 Giving full information to learners

Participants felt that the vaccination should have been explained better to the child and that her child was capable enough to have deeper explanations regarding cervical cancer.

> *"I think they should have explained better to the children. I think they should have given a talk. A talk on how to avoid cervical cancer, they should have explained this to the children, so they could understand why they need to get the injection". (P11)*

4.3.4.2.3 Inviting parents for face to face information

Participants felt that more interaction and more involvement would be preferable. This should be done by inviting parents to school.

> *"It would be better if they have a meeting for the mothers and then they can explain to us more about the injection, I would like to know more about it and be able to ask questions." (P11)*

“At the school, they did not explain what the immunisation was for. There is a shortcoming there. They should explain thoroughly to the parents what the immunisation is for. They assume that because it is the government, then it is fine, but they do not know the reason”. (P12)

4.3.4.3 Immunization time

Some participants were not happy about their children being immunised in their absence. They suggest that immunisation should occur during weekends so that they could also be involved. If the immunisation programme was not feasible over a weekend, then at least an information session regarding the HPV vaccine that parents could attend.

“They should have called a meeting and explained about the signing and the giving of the injection. Rather than doing it in our absence, it should be done on a weekend when the parents can come and not when the kids are at school. I wanted to ask questions”. (P4)

“*It would be better if they involved the parents more at the school. If they did it on a Saturday, then the parents could go and ask some questions”. (P6).*

4.4 CONCLUSION

In this chapter, the researcher presented the study findings of, perceptions of parents of girl children regarding HPV vaccine roll-out in schools in Tshwane District. According to different levels of themes. All four superordinate themes that emerged from data analysis were discussed backed up by the quotations from participant’s transcripts. The next chapter deals with the discussion of the findings, recommendations, limitations, and conclusion of the study.

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CHAPTER 5

DISCUSSION, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The previous chapter presented the results of this study. This chapter provides a synpsis on the entire study. It also provides the the discussion of findings in relation to the studies which have been reviewed. The limitations of the study is also provided based on the study participants and process. Finaly, the recommendations are put forward followed by the conclusions of the entire study.

5.2 RESEARCH PROCESS

This study used the qualitative exploratory design. The study aimed to gain an in-depth understanding of the perceptions girl children's parents regarding the HPV vaccine roll-out programme at schools in Tshwane District, Gauteng Province. For this study, the population was parents of girl children who had received the HPV vaccine between the ages of 9-12 years. The sample used was consisting of 12 participants. Data was collected from these participants using a individual face-to-face interviews guided by an interview guide.

The first part of the interview consisted of questions that were required to collect biographical data and, at the same time, put the participants at ease. This was followed by the following question: What was your perception regarding the HPV campaign? This question was followed by prompts and probes, as indicated in the interview guide. Each interview was audio recorded, and lasted for 30 to 45 minutes. Data was analysed thematically using content analysis. Trustworthiness of the study was ensured throughout

by adhering to the following criteria: credibility, authenticity, dependability, transferability and comfirmability. Ethics principles were maintained throughout the study.

5.3 DISCUSSION OF THE RESEARCH FINDINGS

This section presents the discussion and interpretation of the findings in relation to the existing literature. The presentation focuses on the perceptions of parents of girl children regarding HPV vaccine roll-out at schools in Tshwane District. The results will be discussed based on the super-ordinate themes and themes that emerged from data analysis namely communication of the programme, motivation for allowing their children to be immunized, response to immunisation and suggested ways of enhancing the programme.

5.3.1. Communication of the programme

The discussion will be based on the following themes identified from the study: means of communication, language used and type of information

5.3.1.1 *Means of communication*

This study has shown the importance of accurate communication on the HPV vaccine before administering the vaccine in order to enhance vaccine uptake. Participants showed an appreciation of communication through an information letter and consent form. The HPV information was also broadcasted on the local radio. The importance of accurate communication was emphasised by the National Department of Health (NDoH) when HVP vaccination campaign was initiated in 2014 (The Republic of South Africa 2020: 1). Before the programme, the media covered a total of 373 items on HPV vaccination, published or broadcasted in the period from 1 March to 30 April 2014. This included online communication, printed media, and broadcast media such as radio and television (Delany-Moretlwe, Kelley, James, Scorgie, Subedar, Dlamini & Pillay Rees 2018:431).

The participanting children were given the consent form and letter at school to deliver to their parents or guardian to sign. The consent form needed to be signed and returned the following day. Some participants felt that they were not given enough time to read and understand. They also mentioned that the letter should have been interpreted from English to Sepedi for them to understand the content. Same sentiment was shared by Gilkeya and McReeb (2016: 1454) who found that healthcare providers needed to communicate about the HPV vaccine more effectively (Gilkeya & McReeb 2016: 1454). The authors recommends the use of need to improve communication about HPV vaccination through the use of brochures and fact sheets. They also recommends the the need for using educational materials that are culturally suited to the background, language preference, and literacy of the community (Gilkeya & McReeb 2016: 1463).

In the current study, some of the participants appreciated the communication provided by the health care providers as they felt that they gained knowledge about the HPV vaccine. The same views were found in KwaZulu-Natal (KZN), where there was a high uptake of the vaccine, 99.7% which was attributed to intensive communication with all stakeholders including parents, learners, educators, healthcare workers, and community leaders (Tathiah et al. 2015: 955).

5.3.1.2. Language used

The language used in the information letter and on the consent form was criticised by the participants. They struggled with the English as most of them could not read English well. This led to a lot of misconceptions as the communication was not written in their home language or “mother tongue”. This finding is contrary to the recommended marketing by the Department of Health in 2014 where it produced a social mobilization package which contained school-specific informed consent, consent information, education and communication materials, posters, fact sheets, frequently asked questions, and a guide for educators. These packages were distributed by the provincial Department of Health to the appropriate audiences (schools, parents, and government employees). The packages developed were covering all 11 South African official languages to approximately 18,000 public schools (Delany-Moretlwe et al. 2018:427). This indicates

that the initial intention for the HPV vaccine campaigns was to use a material that was easily readable and to cover all language groups in the country.

In this study, there were a lot of misconceptions, as the participants did not interpret the medical terminology correctly. In the study of Turiho et al. (2017: 12), there have been similar reports related to misconceptions. These led the researches to change the medical terminology to simple everyday language to assist the community. The vaccine was described as the cervical cancer vaccine rather than as an HPV vaccine. The use of simple language is important to enhance parents' understanding of HPV vaccination programme and its purpose. If misconceptions and wrong information is not cleared, that can be dangerous as some participants in this study assumes that the vaccine will prevent their child from falling pregnant.

5.3.1.3 Type of information

The findings of the current study revealed that although most parents did not understand the reason for the vaccination or appear to have any knowledge of HPV, they still signed the consent form and allowed their children to receive the vaccination. The same sentiment was found in a study in western China. Although women lacked basic knowledge about HPV, at least half of them were willing to take the HPV vaccine (He & He, 2018: 8). Another aspect of this study revealed that a lot of parents had a completely wrong understanding of what the injection was for. There are several studies that emphasise the importance of education interventions to ensure that the type of information on HPV and HPV vaccine is correct. A study in Guilford County, North Carolina in the United States of America by Reiter et al. (2011: 2354) regarding heath interventions to school personnel and parents emphasised the importance of education on HPV. Following the education sessions, school staff and parents realised the value of the HPV vaccine. They also felt that primary schools were an appropriate venue for this education.

The researcher found that most of the parents knew that the HPV vaccine was future cancer prevention for their children. However, not all knew that the vaccine is a prevention

against cervical cancer. The parents indicated that they were very willing to have more knowledge of cervical cancer. The same findings were recorded following a survey in Southwest China by Wen, Pan, Zhao and Yang (2014: 5773).

5.3.2 Motivation for the parents to allow their children to be immunized

The discussion on motivation of parents for allowing their children to be immunized will be based on the following sub-themes identified from the study: trusting relationship, relief from going to the clinic, and knowledge of the disease.

5.3.2.1 Trusting relationship

The findings indicated that the parents trust the nurses at the school, the school, and the government. From the findings, the participants had trust in South Africa's national HPV vaccination campaign in general. They felt that the National Department of Health was doing the best for their children. The participants were open to new developments in the health system, and they wanted to be part of the new processes.

In the study of Delany-Moretlwe et al. (2018: 434), there was similar trust. It was noted that the first round of the South African national HPV campaign implemented in 2014 achieved high overall coverage, a good safety outline, and a positive application experience. The success of implementing this vaccine was primarily due to the careful planning, preparation of primary resources, effective coordination, and a population that was receptive.

It was found that in this study, most of the parents were in favour of their children being immunised at schools. This is because they trusted that the campaign was part of a school-based immunisation. The reason for such believe and trust was based on the fact that the school programmes is trustworthy as the vaccine administrators are accountable. If the principle had given his consent and was working together with the Department of

Health, then the parentsdid not have any concerns. They knew that if there was any situation or reaction to the vaccine, they could immediately bring the child to the clinic where she would be attended to. They felt that the school was ultimately responsible for the outcome of the vaccination. This concurred with a study in Fiji by (La Vincente et al. (2015: 1257) reporting successful implementation of HPV vaccination for 9 to 12-year-old girls through existing school-based immunisation programmes. There was more consent to vaccination and satisfaction when the parents had access to information about the vaccine, which influenced their decision.

5.3.2.2. Relieve from going to the clinic

The participants were excited about the fact that the vaccine is offered at school they would not be able to afford a private doctor's consultation and the cost of the vaccine.. The vaccines on the Expanded Programme of Immunisation (EPI) are all fully funded by the National Department of Health (Dlamini & Maja 2016: 676.). The same view was reported in a study conducted by Ginindza, Sartorius, Dlamini and Ostensson (2017:2) indicating that the government of Swaziland fund the HPV Vaccine fully. The country felt that the economic burden of HPV-related cervical diseases represents major public health. Prevention of HPV infection trough national HPV vaccination to pre-adolescent girls at school may reduce the risk of developing cervical cancer and the cost involved.

Several of the participants expressed their relief that the immunisation was done at the school. They said it was a big-time saver, as there was need for them to take time off from work. This was a great asset to the uptake of the HPV vaccine. The same views were seen in America, the School-Based Health Centres by Rickert et al. (2015: 315). The common hindrances, such as parents having to miss work, were diminished. These School-Based Health Centres immunisation programmes in America have increased immunisation rates among socially disadvantaged youth

Most parents felt that taking the child to the clinic would individualise the child, and the child may even refuse. This peer support was very necessary for the success of the

campaign. The same sentiment documented by Rosen et al. (2017: 2). It is important to consider the adolescent perceptions, attitude and influences in order to enhance the uptake of the vaccine.

5.3.2.3 Knowledge of the HPV and its vaccine

The parents lacked knowledge and understanding of the HPV vaccine. There were misconceptions about the HPV vaccine due to a lack of knowledge. There was a strong indication from the parents that they wanted more knowledge of the HPV vaccine and the prevention of cervical cancer. The findings in the study by Shabania, Moodley & Naido (2019: 6) shared the same views confirming that it is of utmost value to provide relevant invormation in order to increase HPV vaccination uptake. A similar finding was documented by White (2104: 433) who found out quality information given to the parents enhance learners adherence to taking HPV vaciination up to the final dose with subsequent reduction of HPV-related diseases. A study conducted in Pietermaritzburg, South Africa by Lwangila et al. (2019: 5-6), showed similar findings showing that knowledge and awareness of the HPV vaccine was mostly poor among urban and rural population groups. Rural and urban communities conveyed the need for more information about the HPV vaccine before they could recommend the vaccine.

The participants obtained information about the HPV roll-out campaign through the media, mainly the radio. The same view was found in the study of (Rosen et al. 2017: 2) information about HPV vaccines through media, individuals and web sites, are associated with greater knowledge and positive perceptions among adolescent girls who received the HPV vaccine.

In this study, although the participants have limited knowledge about HPV, it did not deter them from allowing their daughters to access to the vaccination. This differs from the findings by Barnes et al. (2018: 9) who recorded that parents with limited knowledge related to HPV were hesitant to provide consent for their children to be vaccinated and that they showed negative attitudes towards the HPV vaccine.

Some of the participants' knowledge of the HPV vaccine and cervical cancer was because they had experienced the effects of cervical cancer or had relatives who has the disease or who had died of cervical cancer. The experience of the disease caused them to become advocates for the HPV vaccine encouraging their daughters and members of the community to have their children immunised. The findings of this study attest to that of Shabania, Moodley and Naido (2019:5), who mentioned that most of the participants who knew about HPV vaccination received the information from family or friends who had experienced cervical cancer.

5.3.3 Response to immunisation

The discussion on the response to immunisation will be based on the following sub-themes identified from the results: emotional response of the parents and learner's physical response/reaction to the immunisation.

5.3.3.1 Emotional Response of the parents

There were various emotional responses to the vaccination from the child and the parents. Most children and parents had no worries or concerns over the vaccine. The only reason for the child to be hesitant was fear of the injection. Similar views were found in a study in western Uganda byTuiho et al. (2015: 4) where it was documented that HPV vaccination caused adolescents to have worrisome thoughts. The source of worry was the anticipation of the pain and possible physical harm from the injection. The anxiety and worry of the parents were counterd by their trust of the school and health care providers. The issue of trusting relationship is an important aspect to consider when providing any health care service as the success of most programmes are dependant on such trusts.

5.3.3.2 Learners physical response/reaction to the immunisation

There were no adverse reactions or side effects noted by the parents of the children. The parents reported that their children responded well to the vaccination. This is unique to this study. In other studies, there are reports of localised adverse reactions such as pain, swelling, redness, stinging, bruising, bleeding at the injection site (Cervantes & Doan 2018: 2). These researchers also reported generalised physical responses such as nausea, diarrhoea, syncope, paraesthesia, headaches, and fatigue following HPV vacciantion. Most of the physica responses mentioned above my be just a coincidence to receiving HPV injections or anxiety related These conditions are often difficult to diagnose and may or may not be associated with the HPV vaccine (Cervantes & Doan 2018: 2).

The participants were confident that the vaccine was an enhancement to their child's future health. Similar views were noted in the study of Turiho et al. (2017:4) where the community was confident that the HPV vaccination program was largely enhancing the health and future health of their children. The most prominent concern in this study was that as a result of the HPV vaccine, a young girl commenced her menstruation which parents assumes it may affect thir children fertility in future. Similar findings were recorded by Turiho et al (2017: 12) mentioning that some parents felt that HPV vaccine could cause infertility and have adverse effects on reproductive health. Another study showed the same views, a common reported symptom was that the HPV vaccine causes menstrual irregularity (Suzuk & Hosono 2018: 102).

5.3.4 Suggested ways of enhancing the programme

The discussion on suggested ways of enhancing the programme are based on the following sub-themes: use of contextual, relevant language, improved means of communication, and immunisation time.

5.3.4.1 Use of contextual, relevant language

Most of the participants only received the information letter, the consent form without the verbal explanation regarding the HPV vaccine. They could not put the information into the context and relate it to the vaccination of their children. In USA, Cartmell, Mzik, Sundstrom, Luque, White and Young-Pierce (2019: 1014), found that ineffective messaging, misinformation and poor communication about the vaccine negatively impacted its uptake. The participants thereore recommended the need for understanding effective messaging channels and methods of dissemination information is critical to maintain the vaccine uptake.

5.3.4.2 Improved means of communication

The parents wanted to be more involved in the vaccination of their children through being given adequate information. They would have liked to have face-to-face contact with the health care workers. In the study of La Vincente et al. (2015:257), the parents decision-making concerning the uptake of the HPV vaccine was directly influenced by the parent's opportunity to ask the question and have opportunities to share their concerns about the vaccine. Parents need more information as proper communication is a key to the success of HPV vaccination programme.

5.3.4.3 Immunization time

The parents would have liked better explanations and opportunities to ask questions about the vaccine and be more informed. They felt that if the vaccine times could be changed to weekends when the parents are not working it will enable them to participate more. Similar sentiment was shared by White (2014: 434), where it is suggested that by accommodating and educating parents, the numbers of children who complete the HPV vaccine programme increased. Full involvement of parents may increase their confidence in the HPV vaccination programme and enhance their support. This will inturn leads to success of HPV vaccination rollout at schools.

5.4 LIMITATIONS OF THE STUDY

The study was limited to parents visiting clinics at Clinic Soshanguve. Only parents who speaks Sepedi or English were included in the study, thus excluding other language speakears while Soshanguve is a multi-ethnic and multilingual township which does not only have South African, but people from other countries in Africa. Therefore findings cannot be generalised to other clinics. The sample size was also small, with only twelve participants who participated in the study. However, the results may be transferable to other public clinics in the same district. A limitation to this study was that the researcher needed to work through an interpreter as the researcher could not speak Sepedi. In the study of conducted byBerman and Tyyskä (2010: 186), it was highlighted that ambiguities could arise when working through an interpreter. To avoid these ambiguities, the researcher consulted and trained the interpreter before commencing the collection of data. Initially, the topic under study was “Experiences of parents of girl children regarding HPV vaccine roll out in schools in Tshwane, Gauteng.” This was however later changed to “Perceptions of parents of girl children regarding HPV vaccine roll out in schools in Tshwane, Gauteng” due to unforeseen challenges in execution which led to the change of the supervisor.

5.5 RECOMMENDATIONS OF THE STUDY

In this study the findings were discussed, this section focuses on the recommendations formulated to assist health care providers in understanding the perceptions of parents of girl children regarding HPV vaccine roll-out in schools in Tshwane, Gauteng. Implementation of this recommendations may enhance HPV vaccination uptake. The comendations are grouped under the following headings: Communication of the programme and proposed future studies.

5.5.1 Communication of the programme

The following recommendations focuses on how the HPV vaccination communication can be improved:

- There is a need for continuous effective communication regarding HPV Vaccine. All stakeholders need to be involved. The Department of Health (DOH) and the Department of Education (DOE) at all levels, school governing bodies, family members, school community including learners and healthcare care providers of diverse categories including nurses and doctors.
- The information letters, consent forms must be written in the home language of the recipients.
- The language used in the brochures, information letters, and consent forms must be simple and non-medical terms to avoid misconceptions.
- The parents of the child should be given more time to understand the letter and consent form before returning the signed consent to the school.
- In order to communicate the programme all forms of media should be considered, radio, television, written articles, distribution of brochures, community announcements.
- To prevent misinformation or incomplete information, education interventions on HPV and HPV vaccine must consistently continue.
- Dissemination of information effectively with the use of appropriate messaging channels.
- Where possible, the information should be communicated through face-to-face contact from health care worker to parents to enable community members to ask questions.

5.5.2 Proposed future studies

As this study was qualitative, focusing only on Sepedi and English speaking parents, the researcher is recommending the following studies:

- Quatitative study at Tshwane district targerting parents from different ethnic groups and languages on knowledge on attitudes of parents towards HPV vaccination for learners.
- The attitudes of teaters towards HPV vaccination at schools.
- A longitudinal study to track the immunisation pattern of the young girls from 9-12 years and also the reactions that occurred.

5.6 SUMMARY OF THE RESULTS

The summary of the results based on the question: What are the perceptions of mothers/ guardians of girl children regarding the HPV vaccine roll-out programme at schools in Tshwane District?. This questions have been answered as the results indicated that parents were in supportive of the HPV vaccine, they perceived the vaccine in a positive manner. The results further indicated parents had minimal knowledge of cervical cancer, not indicating that it is preventable through vaccination. They still regarded it as being serious disease.However, this lack of knowledge did not prevent parents from consenting to their girl children from being vaccinated as they felt that all immunisation health-enhancing. Though the participants consented that their children should be vaccinated for HPV, they feel that the communication was not adequate when considering the method used for communication and the language used.

5.7 CONCLUSION

This study reports on the perceptions of parents of girl children regarding the human papillomavirus (HPV) vaccine roll-out programme at schools in Tshwane District, Gauteng Province. The aim of the study was to gain an in-depth understanding of the perceptions of parents of girl children regarding the HPV vaccine roll-out programme at schools in Tshwane District, Gauteng Province. The researcher used a qualitative exploratory

research design to address the research objective of the study as the qualitative method enables the researcher to explore and describe the study phenomenon. Data were collected from 12 parents of girl children who received the HPV vaccine at one of the schools in Soshanguve township, which is one of the biggest townships in the Tshwane District. Data was analysed manually using content analysis. The four superordinate themes that emerged from data analysis are: Communication of the programme; Motivation for allowing their children to be immunized, Response to immunisation, and Suggested ways of enhancing the programme. These themes were discussed in relation to existing literature. Recommendations were made based on the findings to enhance the HPV vaccination programme and for future research.

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Appendix A

GAUTENG PROVINCE
REPUBLIC OF SOUTH AFRICA

Enquiries: Mpho Moshime-Shabagu
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TSHWANE RESEARCH COMMITTEE: CLEARANCE CERTIFICATE

DATE ISSUED: 08/03/2019
PROJECT NUMBER: 15/2019
NHRD REFERENCE NUMBER: GP_201812_006

TOPIC: Experiences of mothers/guardians of girl children regarding HPV vaccine roll out in schools in Tshwane, Gauteng

Name of the Researcher:	Mrs. Catherine Calder
Name of the Supervisor:	Ms. A. Mosalo
Facility:	Soshanguve CHC Soshanguve 2 clinic Soshanguve Block X Soshanguve Block TT Soshanguve Block JJ
Name of the Department:	UNISA

NB: THIS OFFICE REQUEST A FULL REPORT ON THE OUTCOME OF THE RESEARCH DONE AND

NOTE THAT RESUBMISSION OF THE PROTOCOL BY RESEARCHER(S) IS REQUIRED IF THERE IS DEPARTURE FROM THE PROTOCOL PROCEDURES AS APPROVED BY THE COMMITTEE.

DECISION OF THE COMMITTEE: APPROVED

.....
Mr. Peter Silwimba
Deputy Chairperson: Tshwane Research Committee

Date 08/03/19

.....
Mr. Mothomone Pitsi
Chief Director: Tshwane District Health

Date: 2019-03-08

Appendix B

GAUTENG PROVINCE

DECLARATION OF INTENT FROM THE PHC MANAGER FOR TSHWANE PROVINCIAL CLINICS

I give preliminary permission to **Mrs Catherine Calder** to do his or her research on **'Experiences of mothers/guardians of girl children regarding HPV vaccine roll out in schools in Tshwane, Gauteng'** in

SOSHANGUVE CHC
SOSHANGUVE BLOCK X CLINIC
SOSHANGUVE BLOCK TT CLINIC
SOSHANGUVE BLOCK JJ CLINIC
SOSHANGUVE 2 CLINIC

I know that the final approval will be from the Tshwane Regional Research Ethics Committee and that this is only to indicate that the clinic/hospital is willing to assist.

Other comments or conditions prescribed by the PHC Manager to the Researcher are

The researcher to have an entry meeting with potential facilities before starting with the data collection.

M. MAKHUDU (Mr.)
PRIMARY HEALTH CARE: TSHWANE
Date: 7/2/2019

Appendix C

UNISA

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES

REC-012714-039 (NHERC)

7 June 2017

HSHDC/694/2017
Mrs CM Calder
Student: 5855-733-4

Supervisor: Ms A Masalo
Qualification: MA in Nursing
Joint Supervisor: -

Dear Mrs CM Calder

Decision: Ethics Approval

Name: Mrs CM Calder

Proposal: Experiences of mothers or guardians of girl children regarding Human Papilloma Virus vaccine roll out in schools.

Qualification: MPOHS94

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 7 June 2017 to 7 June 2019.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 7 June 2017.

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*

2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150

Appendix D

CALDER 58557334: ANNEXURE B

Request permission to conduct a research study

The Manager
Mamelodi M.I
K. T. Motubatse Clinic
Soshanguve
0152

Request permission to conduct a research study

My name is Catherine Calder who is a registered nurse pursuing a master's degree in Nursing Science with UNISA (University of South Africa). In order to meet the requirements of the degree I am required to conduct a research study. The title of the study is "Experiences of mothers/guardians of girl children regarding the rollout of HPV vaccine in the district of Tshwane, Gauteng". The purpose of the study is to explore guardian's knowledge of cervical cancer, HPV virus and their understanding of HPV vaccine against cervical cancer.
I am requesting permission and support to access the clinic records in order to identify and confirm details of girls who were vaccinated at the schools during the campaign. The researcher will use the information to invite mothers/guardians to participate in the study.

The researcher will be conducting interviews in English for those that are conversant with the language; however, it may be necessary to use a care worker from the same community who is conversant with the languages spoken to interpret for those who are not able to communicate in English. I have attached my research proposal for your perusal. You may further contact my supervisor Ms. A Mosalo at the University of South Africa should you need any further clarification

Hoping to receive a favorable response.

Yours faithfully

Catherine Calder

Student number: 58557334

Cell no: 0825665631
Email: catherine6401@gmail.com

MS A Mosalo

Supervisor contact: 012 429- 6447

Appendix E

CALDER 58557334:

PARTICIPANTS INFORMATION SHEET

My name is Catherine Calder. I am a registered nurse and pursuing her Master's degree in Nursing Science at the University of South Africa (UNISA). In order to obtain her Master's degree, I am required to conduct a research study. The title of the study is

"Perceptions of parents of girl children regarding the rollout of HPV vaccine In Tshwane."

You are invited to participate in a study because your daughter has received the vaccine (HPV) during the campaign at her school. The researcher would like to interview you regarding your experiences with the rollout of the vaccine. Due to the nature of the questions that will be asked it is important that the interview be conducted at a place comfortable for you, where you will be able to talk freely. The interview will take about 45 minutes to an hour. Since the researcher will not be able to remember all the information discussed she request permission to use tape recorder during the interview to make sure that all the needed information is captured. No names or any other forms of identification will appear on the research information. Since the researcher is not able to speak the language spoken in the community a care worker will be used to interpret. To ensure that information discussed is kept confidential only the researcher and the supervisor will have access to the information. The researcher and the care worker will sign a confidentiality clause to assure that information shared during the interviews is not shared with any people that was not part of the study.

You will not receive any payment for taking part in the study. Your participation in the study is voluntary, should you not wish to take part there will not be any penalties towards you or your daughter for future services in the clinic. Your participation in the study will assist in shedding light on women's experiences with the rollout of the vaccine and planning health education relevant to the level of both parents and learners who are recipients of the vaccine.

There are no foreseeable risks for taking part in the study, but because of the nature of the questions for some who might have had an experience with cervical cancer, it may arise sad emotions. The researcher will arrange for you to receive counselling at no cost should it be necessary.

Should you wish to enquire further about the study, you may contact my supervisor Professor AH Mavhandu-Mudzusi and Dr. S. Mudau.

Thank you for considering the request to participate in the study.

Yours faithfully

Catherine Calder

Student number: 58557334
Cell No. 0825665631

Supervisor
Professor AH Mavhandu-Mudzusi

mmudza@unisa.ac.za

Appendix F-1

CALDER 58557334:

INTERVIEW GUIDE

DEMOGRAPHIC DETAILS

SECTION A:

1.	**Cultural group**	
2	**Age of parents**	
3	**Gender of parents**	
4	**Home Language**	
5	**Employed**	

SECTION B:

1. What is your perception regarding your child receiving the HPV (Human papillomavirus Vaccine)?

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2. Is there anything I did not ask that you would like to say about giving the vaccine to girl children?

Thank you

Appendix F-2

CALDER 58557334:

INTERVIEW GUIDE/SEPEDI

Tshedimoso ya malapi le dinyakwa le maeemo setšhaba

SECTION A:

1.	Setlhopa as setSo	
2	Menwaga mme/motlhokomedi	
3	Bong ba motswadi/motlhomedi	
4	Lemleme lele boleliwang ko gae	
5	Motlhokomedi wa bereka kgotsa	

SECTION B:

1 Maikutlo a gago e bile ama byang geo utlwa gora ngwana wa gago o tlhabelwa kgatlhanong le mogare wa HPV (Humanpapilloma Vaccine)?

---

2. Haa go nale se kesa se botsisang seo batlang go re bolella sona ka go tlhabela ngwana wag ago wa mosetsana kgatlhanong le mogare wa HPV (Humanpapilloma Vaccine)?

Thank you

Appendix G

CALDER 58557334:
INFORMED CONSENT

I ----------have been informed about the study and possible consequence that may arise during the interview. I hereby consent to participate in an interview to be conducted by Catherine Calder.
I understand I will be asked questions and my responses will be audio taped. I understand that my name will not appear on any forms or be used for data presentation.

I understand that participating in the study is voluntary and the participant will be free to withdraw anytime with no effect on their health care.

Date of interview: ----------

Participant's Name: ----------

Participant's Signature: ----------

Appendix H

TRANSCRIPT: FACE-TO-FACE INTERVIEW

Transcription 4 **Date:12 October 2019**

(Childs Father)

Cultural group: Sepedi

Age of Child 9-11 years

Key to Abbreviations

P-Participant

R- Researcher

R: My name is Catherine Calder; I am a registered nurse and who is pursuing her master's degree in Nursing Science at the University of South Africa (UNISA). In order to obtain my master's degree, I am required to conduct a research study. My study is about, "the perceptions of parents of girl children regarding the rollout of HPV vaccine In Tshwane". I will not be able to remember all the information discussed; therefore, I am requesting your permission to use the tape recorder during the interview to make sure that all the needed information is captured. To ensure that information discussed is kept confidential only the researcher and the supervisor will have access to the information. Please feel free to say whatever you want to, there is no right or wrong answer.

R-What was your perception regarding your child receiving the HPV (human Papilloma Vaccine).

P-My daughter was scared She does not like injections. She said when they gave it only hurt for five minutes then there was a little blood and then it was fine after that. When my daughter brought me the letter she was scared because she thought it would be very painful.

R-Tell me more about your perception of your child receiving the HPV (human Papilloma Vaccine).

P- The girls were going to receive HPV which is to prevent cervical cancer.

I read the letter and I thought it was OK!

The letter said you must tick if my child has allergy or if she has any diseases such as TB. My child does not have diseases, but I ticked for allergy because my child has allergy. I was not worried.

My daughter had the injection then she was fine, nothing changed in her body,

no headache nothing. They said they would come again next year.

R-What do you understand about what the injection was for.

P- I was not sure, I think it was not to get HIV or TB.

R-Please tell me if you were happy that your child had the injection at the school.

P-I was not worried, because all the children were there to get the injection. We come to the clinic for injections and we trust the clinic and the school.

I am very happy that my child had the injection. Our baby girls live in a wild world and they are treated badly. If she has the injection, then she will be protected, and she won't fall pregnant unnecessarily and then she will be able to further her studies. As parents we do protect our kids, so the injection plays another protection part.

It shows that the government and the school do take care of our kids. The organisation that came up with this idea to give our young girls this injection I do support them. I must appreciate and support the system 100%.

R-Please explain again how you knew what the injection is for?

P-My daughter she got the letter from school, I read the letter the letter said "prevention". I signed it then she took the letter back to the school. They even said the date that it was going to happen. I understood the letter so that is why I said they must go ahead with the injection.

R-Did you have any concerns?

P-No, I was not worried, because I don't have experience of these things. I could not compare. I have heard about the transplant that is under the skin for prevention. I thought this was another way.

R- Please explain what you mean when you say, "our girls are treated badly".

P- There is child abuse and all those things. This injection will help her, they go to school they come back anything could happen in our absence. There are violent guys who take drugs they grab kids on the road. If she is protected by the injection, then she won't fall pregnant.

R- Should the school have gone about giving your daughter the injection any differently.

P-They should have called a meeting and explained about the signing and the giving of the injection. Rather than doing it in our absence, on a weekend when the parents can come and not when the kids are at school. I wanted to ask questions.

The letter there were no questions there were only statements.

R- Is there anything I did not ask that you would like to say about your daughter been given the vaccine for girl children?

P- Yes, when I spoke to her Mum, she said are we not alerting her and that she is still too young? But I said no we are not alerting her, and I persuaded her mum. Fortunately, this opportunity came. I did not hesitate, and I signed the document.

R- Explain more why you did not hesitate.

P- The school are the parents to our kids while we are at work, they spend more time with our kids then we do. We come from work then we only can spend three hours with them. I trust the clinic; I believe they won't do anything to harm my child.

R-Thank you very much

CONTACT PERSONS

Any concerns or queries regarding this research should be directed to:

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Student number: 58557334
Catherine6401@gmail.com
Cell No. 0825665631

Supervisor
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mmudza@unisa.ac.za